

Foster Poultry Farms, a California Corporation
1333 Swan Street
P.O. Box 831
Livingston, CA 95334

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Environmental
Cleanup Office



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May 28, 2010

Ms. Kristine Koch
Remedial Project Manager
United States Environmental Protection Agency, Region X
Office of Environmental Cleanup, Mail Code ECL-115
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

Subject: Foster Poultry Farms' Response to EPA's CERCLA § 104(e) Follow-up Request
for Information Dated March 8, 2010 re Portland Harbor Superfund Site

Dear Ms. Koch:

Foster Poultry Farms (Foster Farms) responds to EPA's follow-up request for information pursuant to Section 104(e) of CERCLA seeking additional information relevant to the Portland Harbor Superfund Site. Thank you for extending our time to respond until May 31, 2010. This extension enabled Foster Farms to conduct a thorough review and search for the information requested by EPA in its information request.

Foster Farms has undertaken a reasonable and diligent search of its files and records regarding its lease of the property located at 6135 N. Basin Avenue in Portland, Oregon (the "Property") from June 1994 until approximately the spring of 1998 and its operation of a chicken processing facility at the Property during those years. Foster Farms notes that your letter indicates it seeks information regarding "releases or threat of releases of hazardous substances associated with the Portland Harbor Superfund Site." During its review, Foster Farms has found no information indicating that environmental conditions at the Property it formerly leased are associated with contamination at the Portland Harbor Superfund Site. A number of environmental reports for the Property are attached and provided with this response. Although the reports describe minimal surface contamination at the Property, there is no suggestion in the reports that the Property has contributed contaminants to the Portland Harbor Superfund Site. Further, the reports document that surface contamination at the Property predated the period when Foster Farms leased the Property and was necessarily caused by other parties' operations.

Foster Farms has taken a further step and has also searched public records in an effort to locate information responsive to EPA's request. The results of that research effort are discussed in this response.

Foster Farms has fully responded to all of the questions posed by EPA's information request after carefully and diligently reviewing all of the available and responsive information located by Foster Farms. Foster Farms declines to sign the declaration requested by EPA and is aware of no legal requirement in CERCLA for such a sworn declaration. However, we would be willing to consider any legal authority that EPA may wish to present in support of its request and to reconsider the matter at that time.

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Section 1.0 Respondent Information

1. Provide the full legal, registered name and mailing address of Respondent.

Foster Poultry Farms, a California corporation
1000 Davis Street
Livingston, CA 95334

2. For each person answering these questions on behalf of Respondent, provide:

- a. full name;**
- b. title;**
- c. business address; and**
- d. business telephone number, electronic mail address, and FAX machine number.**

James Marnatti
Director of Environmental Affairs
Foster Poultry Farms, a California corporation
1333 Swan Street
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Livingston, CA 95334
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Charles Esler, Principal
Carrie Rackey, Environmental Scientist
AMEC Earth & Environmental
7376 S.W. Durham Road
Portland, Oregon 97224
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Business fax number: (503) 620-7892
Email addresses: charles.esler@amec.com; carrie.rackey@amec.com

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Section 5.0 Regulatory Information

- 3. Provide a list of all local, state and federal environmental permits ever issued to the owner or operator on each Property (e.g., RCRA permits, NPDES permit, etc.). Please provide a copy of each federal and state permit, and the applications for each permit, ever issued to the owner or operator on each Property.**

Foster Farms never owned the Property. It conducted a chicken processing operation at the Property pursuant to a lease from 1994 until approximately the spring of 1998 after it purchased the Lynden Farms business assets in 1994, but not the Property. Based on our review of the available records and information, the following permits were issued to the Lynden Farms chicken operations during this time period:

- 1) Industrial Wastewater Discharge Permit #400, which was issued the City of Portland Bureau of Environmental Services to Lynden Farms on July 19, 1995, and expired on June 30, 2000. The permit listed pH as the regulated parameter.
- 2) Stormwater Discharge Permit #1200-C for construction activities, which was issued by Oregon DEQ to Lynden Farms on October 22, 1997 and expired on June 30, 2002. The permit specified copper, lead, oil and grease, pH, total suspended solids, and zinc as the regulated parameters.
- 3) Stormwater Discharge Permit #1200-F (referenced in correspondence from the City of Portland to Lynden Farms dated February 27, 1995, regarding "NPDES General Stormwater Discharge Permit #1200-F inspection, February 21, 1995."
- 4) Permit for waste oil tank, permit # BCFJA (referenced in letter from Lynden Farms to Oregon Department of Environmental Quality dated February 15, 1994, which is attached to AGRA Earth & Environmental's Phase I Environmental Site Assessment dated August 1998, which was previously provided to EPA by Foster Farms).

Copies of the above-listed permits are not attached to this response because Foster Farms has been unable to locate a copy of these permits in its files or in public records. Information regarding the first two permits listed above was obtained from Mr. Miguel Santana of the City of Portland Bureau of Environmental Services, who was contacted by Foster Farms' consultant, AMEC, on April 20, 2010.

In a further effort to locate copies of the permits requested by EPA, Foster Farms' consultant, AMEC, contacted the City of Portland's records department on May 5, 2010. Ms. Angela Peshke was able to verify that the two permits identified above had been issued in the 1990s, but advised that the City of Portland has a policy of retaining permits in its files for six years after expiration, and that the two permits had therefore been discarded. No further information regarding the permits was available from the City of Portland's records department.

Foster Farms also searched the Oregon DEQ's online wastewater permit database (<http://www.deq.state.or.us/wq/sisdata/sisdata.asp>) in an effort to locate permits for the Lynden

Farms operations at the Property. The DEQ database indicates that two wastewater discharge permits (file number 107038) were issued to the Property under the common name Lynden Farms (legal name, Belozor Farms, Inc.). The database indicates that the permits are now inactive and does not provide additional information such as the dates of issuance or expiration or any compliance requirements. DEQ was contacted by AMEC on April 20, 2010 to request a copy of the two permits. Ms. Diana Adams of DEQ indicated that the file for this facility had been archived and that no information was readily available. Ms. Adams at DEQ did not have dates or any other details regarding the permits. AMEC also contacted the DEQ's Water Quality Division records department to request information about the archived permits, but has not received a response as of May 27, 2010.

4. **Foster Farms 104(e) response included a memo from the City of Portland dated February 27, 1995 discussing Lynden Farms NPDES general storm water discharge permit #1200 inspection. Provide all documentation regarding the NPDES permit information outlined in this memo between Lynden Farms and the City of Portland.**

After conducting a thorough and diligent review of its files, Foster Farms has been unable to locate any other documentation regarding the requested storm water discharge permit, except as set forth in response to Request no. 3, above.

Section 7.0 Property Investigations

5. **Describe all investigation of soil, water (ground or surface), sediment, geology, and hydrology or air quality you possess and/or had conducted on or about each Property. Provide copies of all data, reports, and other documents that were generated by you or a consultant, or a federal or state regulatory agency related to the investigations that are described.**

This section describes all known historical environmental investigations at the Property. The scope and analytical results of each investigation are summarized in Table 1 (attached). The areas of the Property that were sampled during each investigation are identified on Figure 1 (attached), which uses as its base map a site layout from the 1998 Phase I Environmental Site Assessment by AGRA Earth & Environmental.

*Environmental Property Assessment, May 1992
6135 N. Basin Avenue, Portland, Oregon
Prepared by PBS Environmental, Inc.*

This report, prepared by PBS Environmental, Inc. ("PBS"), for the property owner documents the findings of an assessment of the Property conducted in May 1992. A copy of the report is provided as FF 001 to 048. The assessment comprised a visual survey of the Property, review of federal, state and local agency records, review of historical documents and interviews with persons knowledgeable about the Property. This assessment did not include environmental media sample collection.

At the time of the assessment, the Property was developed as a chicken processing plant. The Property reportedly was undeveloped marshland prior to its development with housing in the early 1940s. The report indicates that the Property was redeveloped for industrial use by 1957. Historical records indicate that the vicinity of the Property was known as Mock's Bottom and may have been used as a garbage dump in the late 1950s. A historical city directory shows that the Property was occupied by Weitz Hettelsater Engineers & Construction in 1960. In 1961, the Property was occupied by a Western Farms Association poultry plant and feed mill. The report states that Lynden Farms Poultry Plant began operations at the Property in 1982.

Significant findings documented in the report are listed below:

- A 275-gallon unregistered waste oil underground storage tank (UST) was identified at the Property during the visual survey. The report recommends obtaining a general operations permit for the UST from the DEQ and either conducting a tank tightness test or collecting soil samples from the UST area.
- Stained soil was observed in an area located near the waste oil tank outlet.
- Three electrical transformers were observed on the Property during the visual survey. Two of the transformers were labeled as containing less than 48 parts per million (ppm) polychlorinated biphenyls (PCBs). The third transformer was unlabeled. Stained soil was observed near the transformers.
- Stained soil was observed near a truck parking area.
- DEQ records cited in the report indicate that one registered gasoline UST and one registered diesel UST were removed from the Property in 1990 and 1991, respectively. No contamination was reported during tank decommissioning.

Phase II Environmental Assessment, 1992
6135 N. Basin Avenue, Portland, Oregon
Prepared by PBS Environmental, Inc.

This report was summarized in a 1993 report by McLaren/Hart Environmental Engineering Corporation ("McLaren/Hart"), which is discussed below. A copy of the April 29, 1993 McLaren/Hart report is provided as FF 049 to 071. The PBS Phase II Report was not available for review. The information regarding the Phase II environmental assessment by PBS presented in this section was obtained from the 1993 McLaren/Hart report.

PBS collected surface soil samples from four locations at the Property in 1992. A summary of the sample types and locations and laboratory analytical results is provided below.

- Two surface soil samples were collected beneath an area of stained asphalt adjacent to an electrical transformer at the Property. The samples were analyzed for PCBs. No PCBs were detected.

- Two surface soil samples were collected from a barrel storage area. The soil samples were analyzed for PCBs, total petroleum hydrocarbons ("TPH"), and chlorinated solvents. TPH was detected at 230 ppm and 2,800 ppm. PCBs were detected in one sample at 0.3 ppm. No chlorinated solvents were identified above method detection limits.
- One sample described as sediment was collected from an exposed pipe trench in the boiler room. Reportedly, the pipe in the trench formerly connected the boiler to a diesel UST that was decommissioned by removal in 1991. The sample was analyzed for PCBs, TPH, and chlorinated solvents. TPH was detected at a concentration of 120,000 ppm. PBS concluded that the heavy oil detected was likely associated with spills of lubricating and/or hydraulic oil stored nearby. No PCBs or chlorinated solvents were detected in the sample.
- Two soil samples were collected from beneath a layer of asphalt north of the chemical storage room. The samples were analyzed for pH only, with results ranging from 9.07 to 9.35.

Update to the Environmental Site Assessment of Lynden Farms, April 1993
6135 N. Basin Avenue, Portland, Oregon
Prepared by McLaren/Hart

This report was prepared by McLaren/Hart to provide an updated evaluation of potential environmental impacts at the Property since the May 1992 Environmental Property Assessment conducted by PBS. A copy of the report is attached as FF 049 to 071.

The assessment described in the 1993 update report consisted of a visual survey of the Property, interviews, and facility file reviews, reviews of historical resources, and government agency interviews and file reviews. The report stated that the Property was in use as a chicken processing plant at the time of the survey. The report lists the following potential environmental concerns:

- An unpermitted waste oil UST and piping are present at the Property. The UST and piping have not been monitored or integrity tested.
- Approximately 6 square feet of stained soil was observed around 55-gallon drums of hydraulic oil, motor oil, and antifreeze stored on the ground near the truck maintenance shop.
- Approximately 20 square feet of staining was observed on the ground adjacent to pad-mounted transformer.
- Laboratory reports showing elevated biological oxygen demand and total suspended solids levels in waste water were identified during a file review.

- Approximately 12 square feet of stained soil was observed near a storm drain in a truck parking area west of the main building.
- Damaged underground stormwater piping reported during an interview with the plant engineer may have provided a pathway for impacted stormwater to come into contact with soil (damaged piping reportedly had been replaced).
- Historical records indicate that the Property is located on filled marsh land. No information regarding the source of the fill material is available.
- Site building materials may contain asbestos.
- A former 8,000-gallon gasoline UST reportedly was removed from the parking lot north of the main building in 1990. The UST may not have been removed in accordance with DEQ sampling requirements.
- Approximately 120 square feet of staining was observed on concrete and soil in a trench located inside an engine room located east of the boiler room.
- Approximately 6 square feet of staining was observed on concrete and asphalt beneath and adjacent to an oil water separator adjacent to the engine room.
- Approximately 75 square feet of staining was observed on the concrete floor of the maintenance shop near floor drains reportedly connected to the sanitary sewer system.
- A waste oil sump, underground piping, and petroleum releases were observed in the truck maintenance shop.
- Approximately 6 square feet of stained soil was observed northwest of the engine room for the chiller.

*Analytical Results of Soil/Groundwater Investigation for Preliminary Remediation Estimate
January 1994
6135 N. Basin Avenue, Portland, Oregon
Prepared by McLaren/Hart*

Despite a diligent search for relevant information, this report, which was prepared by McLaren/Hart in January 1994, was not located. However, a summary of the report was included in the 1995 report prepared by Energy & Environmental Solutions ("E&ES"), described below in a separate section. The description of the January 1994 McLaren/Hart report set forth below is derived from the summary of that document in the 1995 E&ES report.

In December 1993, McLaren/Hart advanced six borings at the Property for collection and analysis of soil and groundwater samples. The sampling and laboratory analytical results are summarized below:

- One soil sample (from 6 feet below ground surface ["bgs"]) and one grab groundwater sample were collected from a boring completed near the location of former 8,000-gallon gasoline UST. The samples were analyzed for volatile halogenated organic compounds ("VHOCs"), TPH, and volatile aromatic compounds ("VACs"). Hydrocarbons in the motor oil range were detected in the soil sample at 66 ppm, and toluene was detected in the soil sample at a concentration of 0.047 ppm. No other analytes were detected in the grab groundwater sample.
- One soil sample (from 16 feet bgs) and one grab groundwater sample were collected from a boring completed near the active waste oil UST. The soil sample was analyzed for VHOCs, TPH, VACs, PCBs, and polynuclear aromatic hydrocarbons ("PNAs"). The groundwater sample was analyzed for VHOCs, TPH, and VACs. No analytes were detected in either the soil or the groundwater sample.
- Two hand auger borings were completed to a depth of 0.75 feet bgs beneath an area of surface staining outside the boiler room. One sample of gravel sub-base from the bottom of each boring was submitted for analysis of VHOCs, TPH, VACs, PCBs, and PNAs. Hydrocarbons in the motor oil range were detected at concentrations of 69 ppm and 85 ppm. Toluene was detected at concentrations of 0.045 ppm and 0.026 ppm. No other analytes were detected.
- Two hand auger borings were completed to a depth of 0.75 feet bgs beneath an area of surface staining outside the engine room. One sample of gravel sub-base from the bottom of each boring was submitted for analysis of VHOCs, TPH, VACs, PCBs, and PNAs. Hydrocarbons in the motor oil range were detected at concentrations of 75 ppm and 110 ppm. Toluene was detected at concentrations of 0.017 ppm and 0.0225 ppm. The PCB congener, Aroclor 1254, was detected at concentrations of 0.13 ppm and 0.25 ppm. No other analytes were detected.
- Two hand auger borings were completed to a depth of 0.75 feet bgs beneath an area of surface staining near the oil/water separator. Hydrocarbons in the motor oil range were detected at concentrations of 350 ppm and 490 ppm. Toluene was detected at concentrations of 0.79 ppm and 0.23 ppm. The PCB congener, Aroclor 1254, was detected at concentrations of 1.8 ppm and 0.53 ppm. No other analytes were detected.

Soil Testing Services, October 1994

Prepared by REA Environmental Service and Testing, Inc.

6135 N. Basin Avenue, Portland, Oregon

This report is attached as FF 072 through FF 087, and provides a description of soil sampling conducted at the Property in September 1994. REA collected twenty surface soil samples from the following four areas of stained soil observed at the Property:

Area 1 – Eight samples were collected from surface soil located in a truck parking area west of the offices and cold storage areas.

Area 2 – Four samples were collected from surface soil located outside the southwest corner of the vehicle maintenance shop.

Area 3 – Four samples were collected from surface soil located east of the water reservoir where hydraulic oil and detergent barrels formerly were stored.

Area 4 – Four samples were collected from surface soil located east of the covered truck port along a northeast-southwest oriented fence line where hydraulic oil and detergent barrels formerly were stored.

Two samples collected from each area were submitted for laboratory analysis of diesel- and heavy oil-range hydrocarbons. No detectable concentrations of diesel-range hydrocarbons were detected. Heavy oil-range hydrocarbons were detected in all samples, with concentrations ranging from 33.8 to 357 ppm. The highest heavy oil-range concentrations were detected in samples collected outside the vehicle maintenance shop (Area 2).

*Results of Investigation of Morf Family Trust Property/Foster Farms Facility, April 1995
Prepared by Energy and Environmental Solutions ("E&ES")*

This report describes soil sampling conducted at the Property in March 1995 (a copy is attached as FF 088 through 202). During the investigation, soil samples were collected from 12 borings at the Property. The borings were located in areas identified as potential sources of contamination during previous assessments. The investigation findings are summarized below:

- Three soil borings were completed near the location of a former 8,000-gallon gasoline UST. Nine soil samples were collected at depths ranging from 5 to 15 feet bgs and analyzed for TPH-G. No TPH-G was detected.
- Five borings were advanced to depths ranging from 3 to 5 feet bgs in areas where stained soil was observed. Ten soil samples from these borings were submitted for analysis of TPH-G, TPH-D, and TPH-MO. TPH-G was not detected. TPH-D was detected at concentrations ranging from 12 ppm to 100 ppm. TPH-MO was detected at concentrations ranging from 11 ppm to 28 ppm.
- Four borings were advanced to depths ranging from 0.75 to 2 feet bgs in areas where stained asphalt and concrete were observed. Four samples were collected and analyzed for TPH-G, TPH-D, and TPH-MO. TPH-G was not detected. TPH-D was detected in two of the samples at concentrations of 68 ppm and 120 ppm. TPH-MO was detected in one sample at a concentration of 28 ppm.

*Phase I Environmental Site Assessment, August 1998
6135 N. Basin Avenue
Prepared by AGRA Earth & Environmental, Inc.*

This report was previously provided to EPA in response to its prior CERCLA 104(e) information request to Foster Farms. It documents the findings of an assessment of the Property conducted in

July 1998. The assessment comprised a visual survey of the Property, review of federal, state, and local agency records, review of historical reports, and interviews with persons knowledgeable about the Property. This assessment did not include any intrusive sampling or assessment.

The report conclusions state that, although no evidence of widespread subsurface contamination resulting from past or current Property use was identified, areas of contamination were identified during previous investigations. Several areas of surface staining including areas near the boiler room and oil/water separator, near a solvent drum at the entrance to the maintenance shop, and at a former battery storage area were observed during the assessment. Characterization as to the nature and extent of these observed staining areas was recommended.

Subsurface Investigation, November 1998
6135 N. Basin Avenue
Prepared by AGRA Earth & Environmental, Inc.

This report (previously submitted in response to EPA's prior information request) documents a subsurface investigation at the Property completed in October 1998. The investigation focused on an area near the northwestern corner of the truck maintenance shop, an oil-water separator located west of the engine room, and a chemical drum storage area near the boiler room.

- Two direct-push borings were advanced to depths of 20 and 24 feet bgs near the northwestern corner of the truck maintenance shop. Soil samples were collected from 3 to 7 feet bgs and analyzed for TPH and VOCs. No TPH or VOCs were detected. A groundwater sample was collected from the deeper boring and analyzed for VOCs. No VOCs were detected.
 - Two borings were advanced to depths of 7 and 20 feet bgs near the oil-water separator outside the engine room. Soil samples were collected from 3 to 7 feet bgs, and analyzed for TPH and VOCs. With the exception of tetrachloroethene (PCE) which was detected at 0.13 ppm in one of the borings, no VOCs or TPH were detected in the soil samples. A groundwater sample was collected from the deeper boring and analyzed for VOCs. No VOCs were detected in the groundwater sample.
 - One boring was advanced to 24 feet bgs near the chemical drum storage area. A soil sample was collected from 3 to 7 feet bgs, and analyzed for TPH and VOCs. With the exception of PCE which was detected at 0.19 ppm in one of the borings, no VOCs or TPH were detected in the soil sample. A groundwater sample was collected from the deeper boring and analyzed for VOCs. No VOCs were detected in the groundwater sample.
6. **Describe any remediation or response actions you or your agents or consultants have ever taken on each Property either voluntarily or as required by any state or federal agency. If not otherwise already provided under this Information Request, provide copies of all investigations, risk assessments or risk evaluations, feasibility studies, alternatives analysis, implementation plans, decision documents,**

monitoring plans, maintenance plans, completion reports, or other document concerning remediation or response actions taken on each Property, including the following reports outlined in Agra Earth's 1998 Phase I Environmental Site Assessment:

- a. **May 1992 – Phase I Environmental Property Assessment, prepared by PBS Environmental;**
- b. **June 1992 – Phase II Environmental Assessment;**
- c. **April 1993 – Follow Up Environmental Assessment, prepared by McLaren/Hart;**
- d. **January 1994 – Analytical Results of Soil/Groundwater Investigation for Preliminary Remediation Estimate, prepared by McLaren/Hart;**
- e. **October 1994 – Soil Testing Services REA Environmental Science & Testing; and**
- f. **April 1995 – Subsurface Investigation, prepared by Energy & Environmental Solutions.**

Each of the listed reports is discussed above in response to Request No. 5. Foster Farms is not aware of any other relevant information or reports on the topic of remedial action or remediation at the Property.

Section 8.0 Corporate Information

7. **Provide the following information on Roger Morf, the Howard Morf Family Trust, identified as a previous owner in the June 1995 Statutory Warranty Deed provided in Appendix A of the Agra Earth's 1998 Phase I Environmental Site Assessment:**
 - a. **whether the company or business continues to exist, indicating the date and means by which it ceased operations (e.g., dissolution, bankruptcy, sale) if it is no longer in business;**
 - b. **names, addresses, and telephone numbers of all registered agents, officers, and operations management personnel;**
 - c. **names, addresses, and telephone numbers of all subsidiaries, unincorporated divisions or operating units, affiliates, and parent corporations if any, of the Respondent; and**
 - d. **provide any and all corporate financial information of such affiliated entities, including but not limited to total revenue or total sales, net income, depreciation, total assets and total current assets, total liabilities and total current liabilities, net working capital (or net current assets), and net worth.**

Despite a diligent search for responsive information in its files and records, Foster Farms has located no information responsive to this request. The Howard Morf Family Trust was the owner of the Property during the period of time when Foster Farms leased the Property, but has no other relationship to Foster Farms.

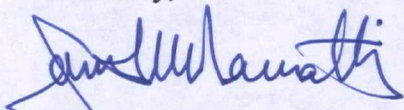
8. Provide property ownership information from 1961 through 1972. Please include:

- a. the dates of ownership; and**
- b. all evidence showing that they controlled access to the Property.**

Foster Farms' lease of the Property began in 1994 when it acquired certain assets of Lynden Farms in an asset sale conducted at the time of the Lynden Farms bankruptcy. Foster Farms has no information regarding the ownership of the Property from 1961 through 1972.

If you have any further question or require additional information, please contact James Marnatti, Director of Environmental Affairs, Foster Poultry Farms, at (209) 394-6934.

Sincerely,



James Marnatti
Director of Environmental Affairs
Foster Poultry Farms

Attachments:

Table 1
Figures 1 and 2
Bates-numbered environmental reports (FF 001 to FF 202)

cc: Charles T. Esler, AMEC
Carrie Rackey, AMEC

TABLE 1
Former Foster Farms Facility
6135 N. Basin Avenue, Portland, Oregon

Report	Figure Reference	Investigation Scope	Results
Letter report re Soil Testing Results at Lynden Farms Site, PBS Environmental, Inc. (1992)	1	a) 2 surface soil samples near transformer, analyzed for PCBs	a) No PCBs detected.
		b) 2 surface soil samples near barrel storage area, analyzed for TPH, PCBs and chlorinated solvents.	b) TPH detected at 230 ppm and 2,800 ppm; PCBs detected at 0.3 ppm in one sample; no chlorinated solvents detected.
		c) 1 "sediment" sample from pipe trench in boiler room, analyzed for PCBs, TPH, and chlorinated solvents	c) TPH detected at 120,000 ppm; no PCBs or chlorinated solvents detected.
		d) 2 surface soil samples north of chemical storage room, analyzed for pH	d) pH from 9.07 to 9.35
Analytical Results of Soil/Groundwater Investigation, McLaren/Hart (1994)	2	a) 1 soil sample (6 ft bgs) and gw sample collected near former 8,000-gallon gasoline UST; analyzed for VHOCs, TPH, and VACs	a) Soil sample: TPH-motor oil detected at 66 ppm; toluene detected at 0.047 ppm. No detections in gw sample.
		b) 1 soil sample (16 ft bgs) and gw sample near waste oil UST, analyzed for VHOCs, TPH, VACs, PCBs, and PNAs	b) No detections in soil or gw samples.
		c) 2 soil samples (0.75 ft bgs) near boiler room; analyzed for VHOCs, TPH, VACs, PCBs, and PNAs.	c) TPH-motor oil detected at 69 ppm and 85 ppm; toluene detected at 0.045 and 0.026 ppm; no other analytes were detected.
		d) 2 soil samples (0.75 ft bgs) outside engine room; analyzed for VHOCs, TPH, VACs, PCBs, and PNAs	d) TPH-motor oil detected at 75 ppm and 110 ppm. Toluene was detected at 0.017 ppm and 0.025 ppm. Aroclor 1254 was detected at 0.13 ppm and 0.25 ppm.
		e) 2 soil samples (0.75 ft bgs) near oil/water separator, analyzed for VHOCs, TPH, VACs, PCBs, and PNAs	e) TPH-motor oil detected at 350 ppm and 490 ppm; toluene detected at 0.79 ppm and 0.23 ppm; Aroclor 1254 detected at 1.8 ppm and 0.53 ppm.
Soil Testing Services, REA (1994)	3	a) 8 surface soil samples near truck parking area west of offices.	All samples analyzed for TPH-diesel and TPH-heavy oil range. No TPH-diesel detected. TPH-heavy oil detected in each sample, ranging from 33.8 ppm to 357 ppm. Highest TPH-heavy oil concentration in samples collected outside maintenance shop.
		b) 4 surface soil samples collected outside vehicle maintenance shop	
		c) 4 surface soil samples collected east of water reservoir	
		d) 4 surface soil samples collected near barrel storage area	
Results of Investigation of Morf Family Trust Property/Foster Farms Facility, E&ES (April 1995)	4	a) 9 soil samples collected from 5 to 15 feet bgs near former 8,000-gallon gasoline UST. Samples analyzed for TPH-gasoline	a) No TPH-gasoline detected
		b) 10 soil samples collected from 3 to 5 ft bgs in areas of stained soil. Samples analyzed for TPH.	b) No TPH-gasoline detected. TPH-diesel detections range from 12 ppm to 100 ppm. TPH-motor oil was detected in range from 11 ppm to 28 ppm.
		c) 4 soil samples collected from 0.75 to 2 ft bgs in areas of stained asphalt/concrete. Samples analyzed for TPH	c) No TPH-gasoline detected. TPH-diesel detected in 2 samples at 68 ppm and 120 ppm. TPH-motor oil detected in 1 sample at 28 ppm.
Subsurface Investigation, AGRA Earth & Environmental (November 1998)	5	a) 2 soil samples (3 to 7 ft bgs) and 1 gw sample outside vehicle maintenance shop. Samples analyzed for TPH and VOCs.	a) No TPH or VOCs detected in soil or gw samples
		b) 2 soil samples (3 to 7 ft bgs) and 1 gw sample near oil/water separator outside engine room. Samples analyzed for TPH and VOCs.	b) PCE detected at 0.13 ppm in one soil sample. No detections in gw sample.
		c) 1 soil sample (3 to 7 ft bgs) and 1 gw sample near chemical drum storage area. Samples analyzed for TPH and VOCs.	c) PCE detected at 0.19 ppm in soil sample. No detections in gw sample.

Notes:

ft bgs = feet below ground surface

gw = groundwater

PCBs = polychlorinated biphenyls

PCE = tetrachloroethene

PNA = polynuclear aromatic hydrocarbons

ppm = parts per million

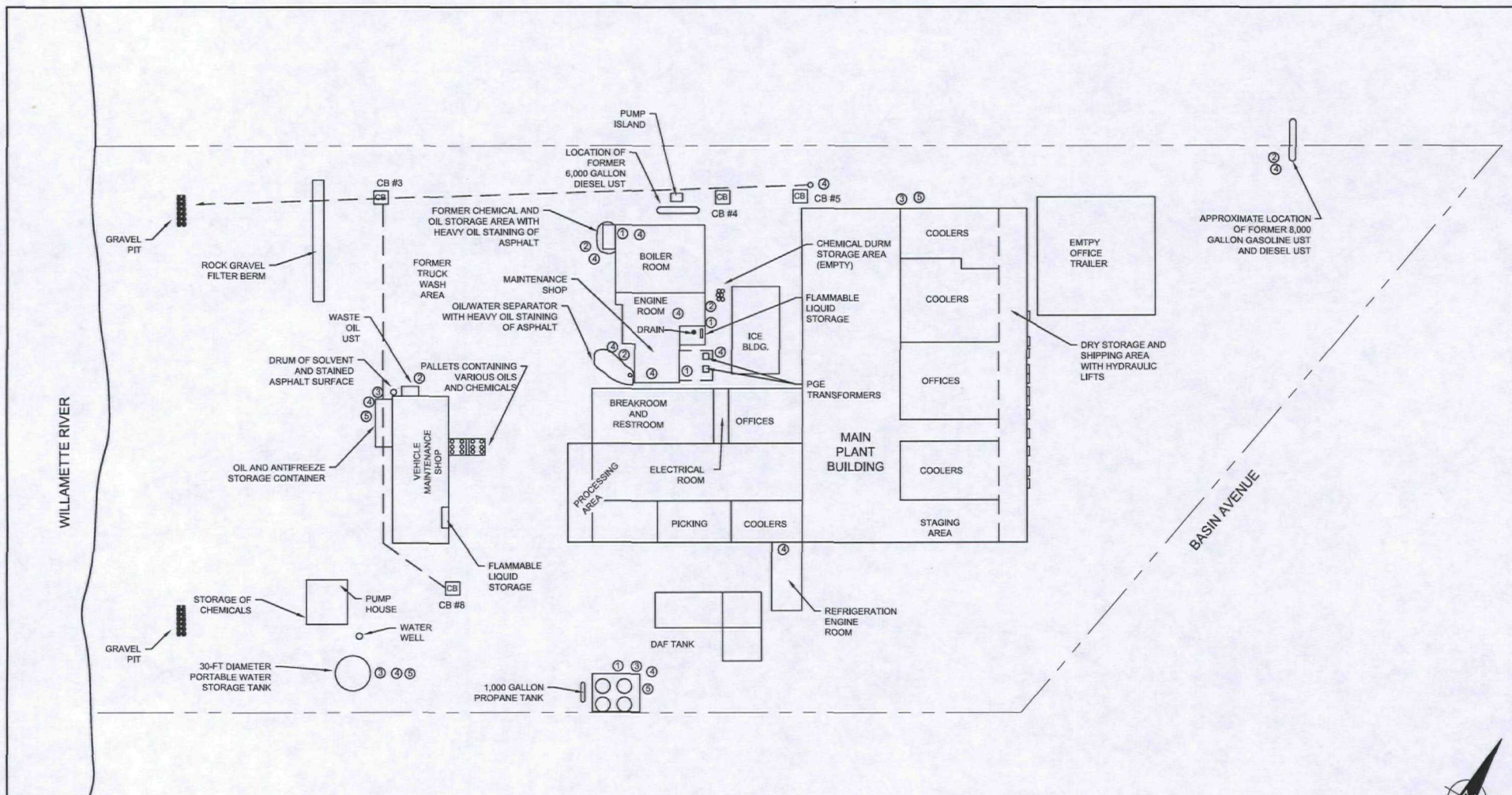
TPH = total petroleum hydrocarbons

UST = underground storage tank

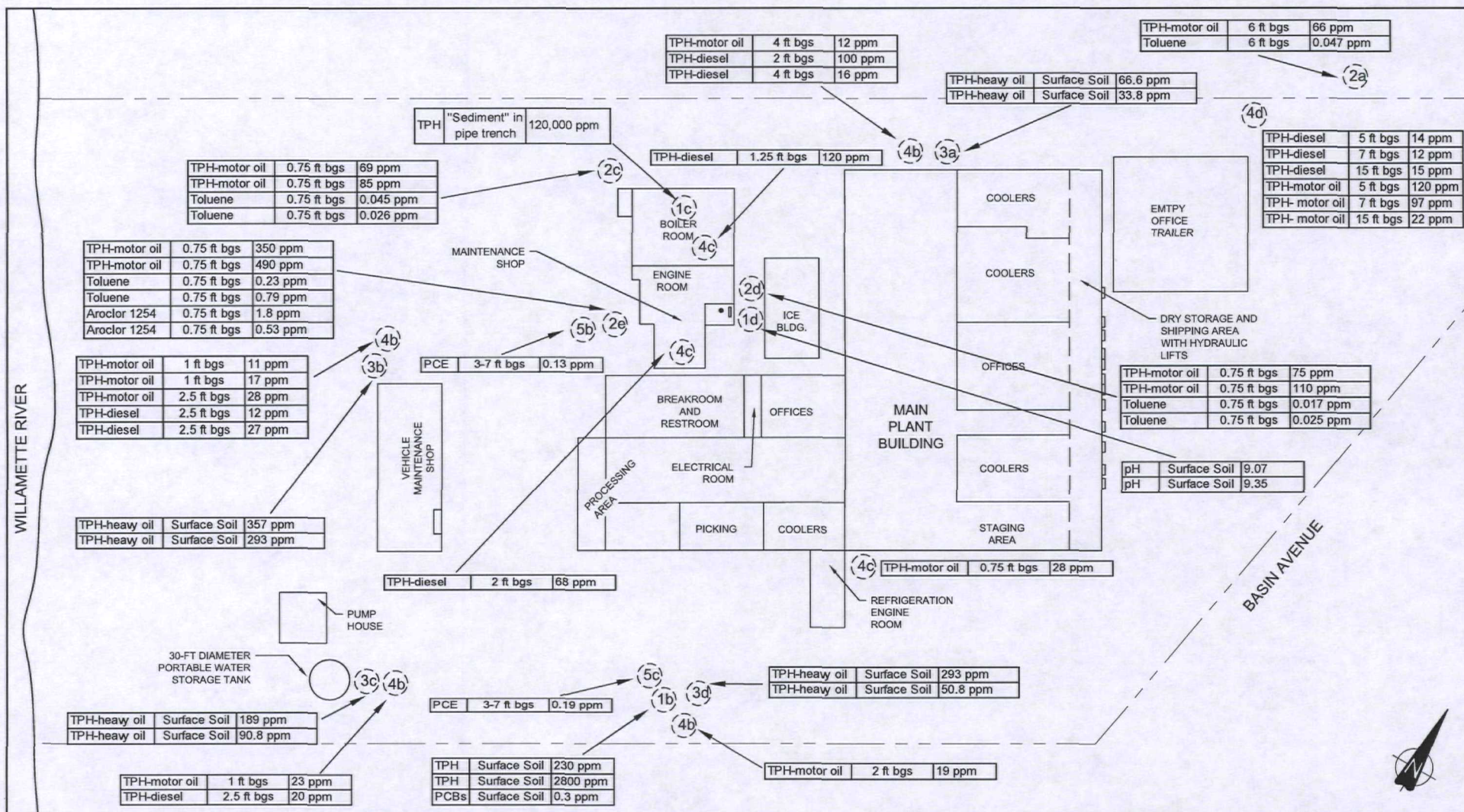
VAC = volatile aromatic compounds

VHOC = volatile halogenated organic compounds

VOC = volatile organic compounds



<p>LEGEND</p> <p>① = REPORT REFERENCE WITH DATA FOR THIS AREA</p> <p>REPORT REFERENCE NUMBERS</p> <p>① PHASE I EISA, 1992, PBS ENVIRONMENTAL ② ANALYTICAL RESULTS OF SOIL/GROUNDWATER INVESTIGATION, JANUARY 1994, MCLAREN HART. ③ SOIL TESTING SERVICES, OCTOBER 1994, REA. ④ RESULTS OF INVESTIGATION OF MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY, APRIL 1995, E&ES. ⑤ SUBSURFACE INVESTIGATION, NOVEMBER 1998, AGRA EARTH & ENVIRONMENTAL.</p> <p>SAMPLING LOCATIONS ARE ESTIMATED. LAYOUT BASED ON 1998 AGRA E&E SUBSURFACE INVESTIGATION REPORT</p>	<p>CLIENT:</p> <p>FOSTER POULTRY FARMS</p> <p>AMEC Earth & Environmental 7376 S.W. Durham Road Portland, OR, U.S.A. 97224</p>	<p>DWN BY: SL CHKD BY: PM/CR DATUM: - PROJECTION: - SCALE: NTS</p>	<p>PROJECT</p> <p>FORMER FOSTER FARMS SITE EPA CERCLA 104(e) RESPONSE LETTER</p> <p>TITLE</p> <p>HISTORICAL INVESTIGATION LOCATIONS AND FORMER FOSTER FARMS PLANT (CIRCA 1998)</p>	<p>DATE: MAY 2010 PROJECT NO: 061M121810 REV. NO.: - FIGURE No. 1</p>
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NOTE:
 SAMPLING LOCATIONS ARE ESTIMATED. LAYOUT BASED ON 1998 AGRA EARTH & ENV.
 INVESTIGATION REPORT.

CLIENT:
 FOSTER POULTRY FARMS

AMEC Earth & Environmental
 7376 S.W. Durham Road
 Portland, OR, U.S.A. 97224



DWN BY: SL
 CHK'D BY: PM/CR
 DATUM:
 PROJECTION:
 SCALE: NTS

PROJECT
 FORMER FOSTER FARMS SITE
 EPA CERCLA 104(e) RESPONSE LETTER
 TITLE
 HISTORICAL ANALYTICAL RESULTS
 (DETECTION ONLY)

DATE: MAY 2010
 PROJECT NO: 061M121810
 REV. NO.:
 FIGURE No.



CONFIDENTIAL

ENVIRONMENTAL PROPERTY ASSESSMENT

for the property located at

6135 N. BASIN AVE.



Prepared by

PBS ENVIRONMENTAL, INC.
1220 S.W. Morrison St.
Portland, OR 97205
(503) 248-1939

PBS Project Number
4912.00

May 1992

ENVIRONMENTAL PROPERTY ASSESSMENT

for

LATHAM & WATKINS

for the property located at

6135 N. BASIN AVE

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Prepared by

PBS ENVIRONMENTAL, INC.
1220 S.W. Morrison St.
Suite 600
Portland, OR 97205

MAY 1992

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SECTION THREE

Appendices

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APPENDIX A

U.S. EPA CERCLIS Sites List

National Priority List-Superfund Sites in the Pacific Northwest, EPA Region 10

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Underground Storage Tanks Within Study Area

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APPENDIX B

City of Portland - Bureau of Buildings Plumbing Inspection Reports

SITE LOCATION

6135 N. Basin Ave
Portland, Oregon 97213

CLIENT DATA

Latham & Watkins
633 W. Fifth Street, Suite 400
Los Angeles, CA 90071-2007

ATTN: James Arnone

PURPOSE

A Level One Environmental Property Assessment (EPRA) was conducted by PBS. The purpose of the EPRA was to identify areas of environmental concern both on-site and adjacent to the site and to present an opinion on the environmental condition of the property.

SCOPE

- 1) Site identification and visual survey;
- 2) Review of federal, state and local agency records regarding the site and adjacent areas;
- 3) Review of historic maps, historic occupants and the nature of past property usage;
- 4) Review of previous soils, geology and groundwater reports in the vicinity of the site;
- 5) Interviews with persons knowledgeable about the site;
- 6) Preparation of the report which summarizes observations and findings relating to the environmental conditions of the site, a summary of the records reviewed and an opinion by PBS with regard to the possible environmental conditions of the site and any areas of concern.

It should be noted that when an assessment is completed without subsurface exploration or chemical screening of soil and groundwater beneath the site, as in this study, no statement of scientific certainty can be made regarding latent subsurface conditions which may be the result of on-site or off-site sources.

The findings and conclusions of this report are not scientific certainties, but rather, probabilities based on professional judgement concerning the significance of the data gathered during the course of the Environmental Property Assessment.

PBS is not able to represent that the site or adjoining land contains no hazardous waste, oil, or other latent conditions beyond that detected or observed by PBS during the study. The possibility always exists for contaminants to migrate through surface water, air or groundwater. The ability to accurately address the environmental risk associated with transport in these media is beyond the scope of this investigation.

CERTIFICATION

1 In the professional opinion of PBS Environmental, this Environmental Property Assessment is sufficient to establish appropriate inquiry into previous ownership and use of the property consistent with good commercial and customary practices described in ORS 465.255(2)(a), ORS 465.255(6), 42 U.S.C. 9601(35) (A)(i), and 42 U.S.C. 9601(35)(B).

Erik Anderson
Project Director

Erik Anderson 5/28/92
Signature Date

A Level One Environmental Property Assessment was conducted by PBS Environmental at 6135 N. Basin Avenue, Portland, Oregon, for Latham & Watkins, Attorneys at Law. The subject property is presently the site of a chicken processing plant. The subject property and surrounding properties were developed in the early 1960's in an area which had previously been a marsh which was gradually filled with sand dredged from the Willamette River.

Adjacent properties have been primarily freight and trucking companies since the development of the area. Leaking underground storage tanks have been reported on many of the nearby properties, however it appears very unlikely that any leaking product has migrated to the subject property.

Two underground storage tanks which previously existed on the subject property were removed in 1990 and 1991. No contamination was reported during decommissioning. One unpermitted waste oil tank exists on the subject property.

It is recommended that the waste oil tank be permitted through the Oregon DEQ, and the tank be tightness tested or the soil around the tank sampled and tested for heavy oil. Stained soil near the electrical transformers should also be tested for PCBs.

SITE LOCATION

The subject property is located at 6135 N. Basin Avenue, Portland, Oregon. The site designation is NW1/4, SE1/4, Section 17, T1N, R1E of the Willamette Meridian.

The site is located in an industrial portion of North Portland known as Mock's Bottom. It is situated between North Basin Avenue to the north, and the Swan Island Lagoon of the Willamette River to the south.

GEOLOGY/HYDROLOGY

The site is located in the Mock's Bottom area, which, up until the 1940's, was a marshy lowland on the Willamette River. The area of Mock's Bottom in which the subject property is located is underlain by 90-100 feet of Quaternary alluvium made up of clayey, silty sand with areas of sand fill dredged from the Willamette River. The alluvium and fill locally contains pieces of wood and other undifferentiated organic debris.

Beneath the alluvium and fill is approximately 300 feet of fine sand and gravels of the Troutdale Formation. Beneath the troutdale Formation is the basalt of the Columbia River Basalt Group.

Shallow groundwater exists within the alluvial sands and silts at a depth of less than 20 feet. The direction of shallow groundwater flow is likely to be to the southeast, toward the Willamette River. Domestic water is supplied to the area from the Bull Run Reservoir (30 miles to the east), and reaches the Portland metropolitan area by pipeline.

PAST USE OF THE SUBJECT PROPERTY AND VICINITY

Up until the 1940's, the subject property and vicinity was a low-lying marsh fed by the Willamette river via a narrow channel on the north end of the Mock's Bottom area. The Union Pacific Railroad ran a rail line across Mock's Bottom as early as 1925.

In the early 1940's, military housing was constructed on the south end of the Mock's Bottom area, presumably to house the personnel working in the ship repair yards at Swan Island during World War II. A photograph taken of the housing area showed an above-ground tank, presumably used for heating oil storage, next to one of the buildings. At that time, the subject property was located between the military housing to the south, and a parking lot for shipyard workers to the north (see photo - 1947).

By 1957, the military housing had been demolished, and industrial buildings constructed in their place. In the same year, an article appeared in the Portland Oregonian, which stated that the Mock's Bottom area has been "labeled as a giant garbage dump". Photos taken in the area show primarily household refuse in areas of Mock's Bottom which could not be identified.

The subject property remained undeveloped until 1960, when the Portland city directory listed the Weitz Hettelsater Engineers & Construction as occupying the site (6135 N. Basin Ave.). The nearest adjacent property was Freightliner Corp. truck manufacturers at 5400 N. Basin Avenue. No listings were given for all of Basin Avenue prior to 1960. In 1961, the Western Farmers Association poultry plant and feed mill occupied the site.

Western Farmers was sole operator of the site until 1982, when Lynden Farms Poultry Plant was listed as the occupant. Lynden Farms currently operates on the site. The ship repair yards to the west on Swan Island remain active.

Adjacent properties have been occupied primarily by industrial facilities, including Christenson Electric (6177 N. Basin Ave.), IML Freight, Inc. (6100 N. Basin Ave.), Western Packaging (6125 N. Basin Ave.), Advanced Contractors & Equipment, Gould Electrical Equipment and Supply, Unistrut Metal Framing, and Camass Co. Boiler Repair (all 6125 N. Basin Ave.).

PRESENT USE OF THE SUBJECT PROPERTY

A site reconnaissance was conducted by Erik Anderson of PBS Environmental on May 11, 1992.

Processes

The subject property is currently being operated as a poultry processing plant by Lynden Farms, Inc. Chickens are brought to the plant on semi-trailer trucks. The pallets of caged chickens are unloaded from the trucks at the south end of the building by forklift, and the cages placed on a conveyor system. The conveyor carries the birds into the building, where they are bled, cleansed, and defeathered. The carcasses are then trimmed, cleaned, and

inspected.

Some of the waste is contained in a 40-yard dumpster, and is sold for pet food and fertilizer, and some is flushed into the sewer system. All non-meat refuse is placed into a 30-yard dumpster and taken to a landfill once a week.

Sewage & Wastewater

Construction blueprints from a remodeling project in 1970 shows that the building is connected to the city of Portland storm sewer system. The City of Portland Bureau of Buildings has no permit on file for connection to sewer (storm or sanitary) except for the pumphouse, which was connected to the storm sewer when it was constructed in 1988. There is also a record of the construction of the two catch basins on the east side of the building in 1971. Those catch basins empty onto the slope which leads to the Willamette River. According to Robert Weiner, Controller for Lynden Farms, process wates from the plant are discharged into the city sanitary sewer system.

According to Mr. Weiner, water runoff from the site goes to a private sewer system, which discharges into the Willamette River through a 60-inch pipe to the east of the subject property, and that the effluent is periodically monitored. The Oregon DEQ - Water Quality Division has no permits on file for the subject property. It is possible that the permit is filed under another name or address.

Water Supply

Domestic water is supplied to the facility by the City of Portland Bureau of Waterworks. The water is pumped to the Portland metropolitan area from the Bull Run Watershed 30 miles to the east. Process water is taken from a well on the south end of the property. The water is pumped into an 18-foot diameter concrete above-ground reservoir, where it is chlorinated before being pumped to the main building.

Building Construction & Asbestos-Containing Materials

The buildings on the site are steel beam framed and sheet metal skinned, and resting on concrete slabs. Walls and ceilings are insulated with fiberglass batting. Space heating is furnished by forced-air gas units in each room. All exposed piping is insulated with fiberglass insulation. Some pipe insulation was covered with protective jackets, and could not be verified as fiberglass.

The office areas are furnished with vinyl floor tile, lay-in ceiling tile, and gypsum board walls. Some rooms have 12"x12" ceiling tiles glued to the walls. Some of the coolers also contain lay-in ceiling tiles. All of these materials are suspected to contain asbestos, and should be tested for asbestos content prior to disturbing them through remodeling, demolition, etc..

Underground Storage Tanks

Vehicle fuel is no longer stored on the property. All trucks are fueled at a card-lock station on Basin Avenue. According to Oregon DEQ files, two underground storage tanks (one

gasoline and one diesel) were removed in 1990 and 1991, respectively. No contamination was reported during either of the decommissionings.

A 275-gallon underground waste oil tank exists on the east side of the vehicle maintenance shop, which was constructed in 1980. Waste oil is poured into a drain in the floor of the work pit, and drains directly into the waste oil tank. According to Joe Delk, lead mechanic, the tank is pumped approximately once per month by Dobbins Oil, Inc.. The waste oil tank is not currently permitted through the DEQ.

Hazardous Materials

Various hazardous materials are used and stored on-site. These materials are primarily cleaning liquids containing phosphoric acid, sodium hydroxide, alcohols, and chlorine bleach. Hydraulic and lubricating oils and red dye (used to identify rancid meat) are also stored in various locations around the plant. All materials appeared to be properly stored in appropriate containers, and evidence of only minor spillage was observed. Spillages worth noting are the stained soil near the waste oil tank outlet, and near the truck parking area along the east side of the building. Catch basins are present in both areas, and may have received some of the spillages.

Electrical Transformers

Three electrical transformers exist between the fabrication shops and the ice house. One of these transformers has been labeled as containing less than 1 ppm PCBs, and the other less than 48 ppm PCBs. The third unit bore no such labels. According the Oregon DEQ, transformer fluid which contains less than 50 ppm PCBs is considered to be PCB-contaminated, and fluid which contains laess than 1 ppm is considered to be non-PCB. There are no reporting requirements for either category of materials, however PCB-contaminated material is still governed by regulations which cover handling and disposal of PCBs. The third transformer was labeled as having been manufactured by the Durham Company from Lebanon, Oregon. No such company presently exists in that town, or in the Portland area.

Dark staining was evident on the ground surface around the transformers. It is not known if the staining is the result of leakage from the transfoimers.

PRESENT USE OF THE ADJACENT PROPERTIES

Most of adjacent properties are freight companies, with the exception of Cenex Feed Company to the east, which is an inactive feed mill. The Port of Portland ship repair yards exist on Swan Island, across the Swan Island Channel from the subject property.

The following government sources have been searched for sites within one mile radius of the site. A full listing of sites is presented in the Appendix of this report. Sites with immediate concern to the subject property are briefly discussed in the following section.

NPL National Priorities List

The NPL identifies abandoned or uncontrolled hazardous waste sites that warrant further investigation to determine if they pose risks to human health or the environment. Sites on the NPL are eligible for long-term "remedial action" under CERCLA.

No sites listed within one mile of the subject property.

CERCLIS Comprehensive Environmental Response, Compensation, and Liability Act Information System

CERCLIS is a database used by the EPA to track activities conducted under its Superfund Program. Sites which come to EPA's attention that may have a potential for releasing hazardous substances into the environment are added to the CERCLIS inventory.

Mocks Bottom

In 1984, the northern area of Mocks Bottom was brought to the attention of DEQ because "the site is reportedly used to dispose of concrete pieces, sod, and soil by the City of Portland. There are no reports of hazardous wastes disposed of there." No additional investigation has been done, and the file is still open.

USDOT-CG Marine Safety Station**6767 N. Basin Ave.**

No information pertaining to this site was available at DEQ. They would be receiving a file from EPA in approximately one month.

DEQ Site Assessment Database

The Department of Environmental Quality (DEQ) maintains a database of reported releases of hazardous substances. Appearance on the site assessment database neither confirms nor denies the release of a hazardous substances at the facility, but instead it serves to document "reported" releases.

Farmer's Exchange**5617 N. Basin Ave.**

This site operated as a pesticide and herbicide blending and bulk storage facility from 1963-1988. It is suspected that barrels of pesticides and chemical wastes were dumped into drains and a dry well. A study has shown soil and groundwater contamination by chromium, arsenic, PCBs, and pesticides. Concentrations in the groundwater of all but the pesticides were above the EPA's Maximum Contaminant Level (MCL) of drinking water. A Preliminary Assessment has been requested by DEQ. File Open.

Freightliner Corp.5400 N. Basin Ave.

Soil contamination was discovered during the removal of 12 underground gasoline storage tanks. Some contaminated soil was left in place beneath the building foundation, and gasoline constituents were detected in the groundwater. Based on the slow movement of groundwater and the lack of human targets in the area, no further action is required. File Closed.

LUST Leaking Underground Storage Tanks

The DEQ maintains a database of leaking underground storage tanks, a frequent source of hydrocarbon contamination of soils and groundwater. The LUST files include leaking tanks, pipes, or overfill spills. A listing of any LUST sites in the area is presented in the Appendix.

Pacific Detroit Diesel5940 N. Basin Ave.

Six underground storage tanks containing diesel fuel and waste oil were removed in 1989, and some of the tanks were found to have leaked. A pocket of soil contaminated with waste oil was left beneath the building, where it is being treated with passive venting. There was no apparent groundwater impact. File Open.

Oregon Freightways5949 N. Basin Ave.

Gasoline, diesel, and waste oil-contaminated soil was discovered during decommissioning of underground storage tanks in 1989. A total of 746 cubic yards of contaminated soil was removed from the site. Groundwater was not encountered. File closed.

Dallas & Mavis Forwarding Company6220 N. Basin Ave.

Diesel fuel-contaminated soil was discovered during the decommissioning of two diesel fuel tanks in 1990. A total of 600 cubic yards of contaminated soil was removed, and is currently being treated on-site. File Open.

PIE Nationwide5550 N. Basin Ave.

A total of 10,500 gallons of diesel fuel leaked from an underground storage tank between 1980 and 1989. An estimated 11,500 cubic yards of soil was affected, but groundwater impact is thought to be minimal. The site is currently being treated by bioremediation and groundwater recirculation treatment. File Open.

UST Underground Storage Tanks

The DEQ underground storage tank database includes operational and decommissioned commercial tanks. A listing of registered underground storage tanks within the study area is provided in the Appendix of this report.

The listing shows two decommissioned tanks for the subject property. DEQ files show that one 8,000 gallon gasoline tank was removed in September, 1990, and one 6,000 gallon diesel fuel tank was removed in November, 1991. No soil or groundwater contamination was reported during either tank removal. File Closed.

Solid Waste Disposal Facilities

The State of Oregon maintains three listings of disposal facilities: 1) Solid Waste Disposal Permit Mailing List, 2) Closure and Regular Solid Waste Active Disposal Permits, and 3) Closed Solid Waste Disposal Facilities.

None listed within one mile of the subject property.

FRG Oregon Hazardous Waste Handlers Notifying as Fully Regulated Generators

Fully regulated hazardous waste generators produce more than 1000 kg (approximately 2,200 pounds or 300 gallons) or more of hazardous waste, or more than 1 kg of acutely hazardous waste in any month.

No sites in adjacent areas sited for hazardous waste handling violations.

SQG Oregon Hazardous Waste Handlers Notifying as Small Quantity Generators

Small quantity hazardous waste generators produce more than 100 and less than 1000 kg of hazardous waste and no more than 1 kg of acutely hazardous waste in any month.

No sites in adjacent areas sited for hazardous waste handling violations.

ON-SITE ENVIRONMENTAL CONCERNS

The following are considered to be items of concern with respect to potential on-site sources of hazardous materials which could result in contamination of soil and/or groundwater on the site.

1. The underground waste oil tank near the vehicle maintenance shop presents a moderate concern. The tank is not permitted with Oregon DEQ, and has not been tightness-tested.
2. Two of the three electrical transformers are labeled as containing less than 48 ppm, which classifies the material as PCB-contaminated, and as less than 1 ppm, which classifies the material as non-PCB. The contents of the third transformer is not known. Soil staining near the transformer may be the result of leakages from the transformers, or it may be from spillage of hydraulic or lubricating oil, which is stored nearby. Moderate concern.
3. Discharges of wastewaters and surface water appear to be in accordance with all applicable regulations. Low concern.
4. Hazardous materials and hydraulic and lubricating oils appear to be stored in a proper manner, and no evidence of significant spillage of these materials was observed. Low concern.
5. Dredged sands, which make up the upper 15-20 feet of the subsurface, were reportedly taken from the Swan Island Basin, directly adjacent to the subject property. There is no evidence that contaminants may have existed in the sands prior to dredging. Any issue arising out of such contamination would become a regional issue, and not specific to the subject property since most of the Mock's Bottom area is covered with dredged sand.
6. Materials are present within the building which are suspected of containing asbestos (vinyl floor tile, lay-in ceiling tiles, glued-on wall tiles, gypsum wallboard). These materials are currently in good condition, and should be tested for asbestos content prior to disturbing through demolition, remodeling, etc.. Moderate concern.

OFF-SITE ENVIRONMENTAL CONCERNS

The following are considered to be items of concern with respect to potential off-site sources of hazardous materials which could result in migration of contamination to soil and/or groundwater on the site.

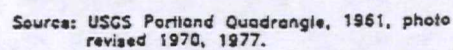
1. None of the sites listed in the Regulatory Review section of this report appear to pose a significant threat to the soil or groundwater on the subject property.
2. The past use of the Mock's Bottom area as an unauthorized landfill is not likely to have caused any significant contamination of the subject property. Photos taken of the Mock's Bottom area during the 1950's showed that the debris may primarily household waste, and not industrial or commercial waste. Geotechnical boring records of the subject property and adjacent property (Cenex Mill) showed no indication of man-made debris or unusual soils.

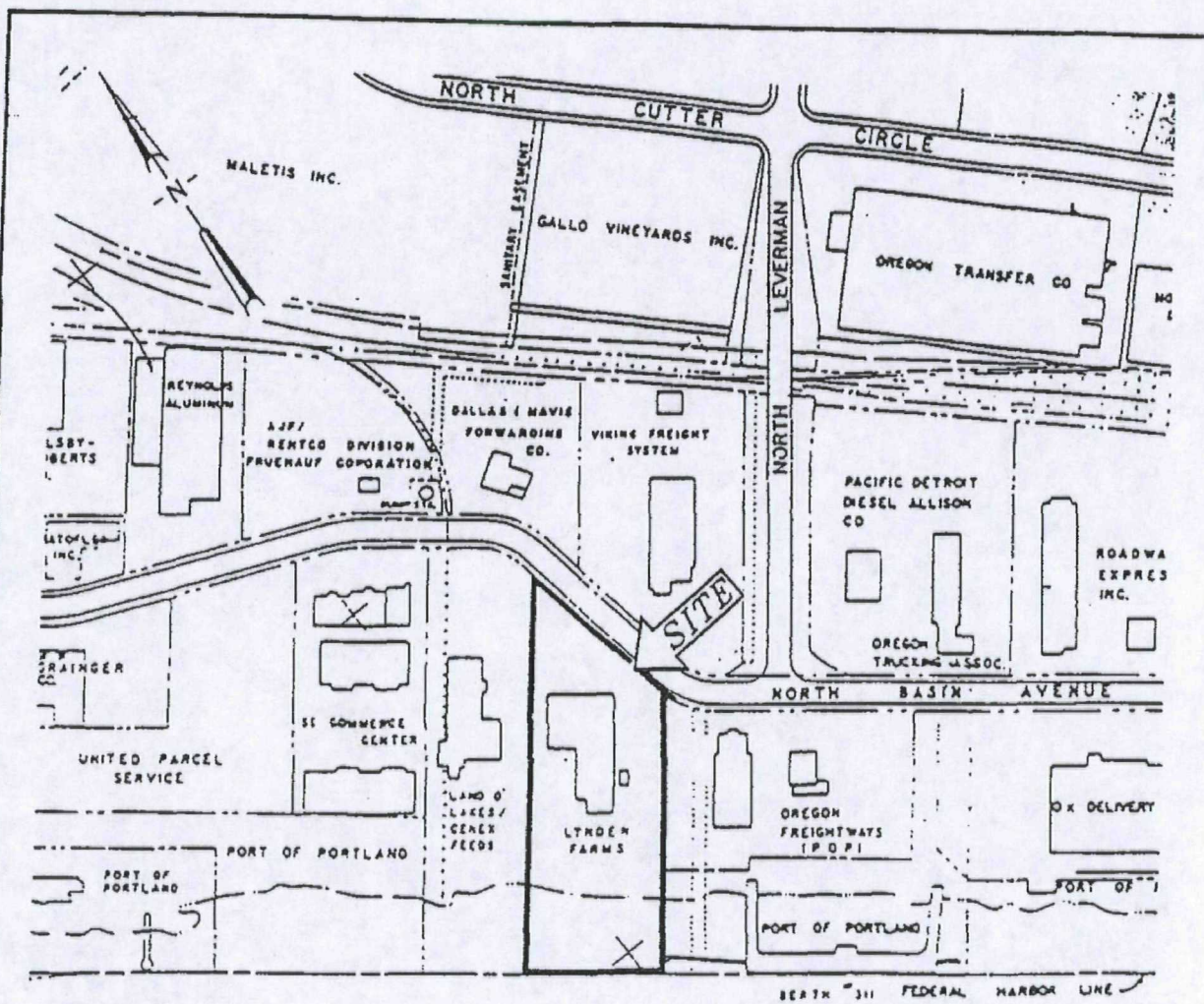
The potential for soil and/or groundwater contamination to exist on the property appears to be moderate. PBS recommends the following actions be taken in response to the concerns identified in this report:

- 1) Apply for an underground storage tank permit for the waste oil tank. Such a permit is required for all underground storage tanks with a capacity over 110 gallons which contain petroleum products, including waste oil.

Perform tightness testing on the tank, or collect soil samples from the vicinity of the tank and test for heavy oils using EPA Method 418.1 Modified. However, soil samples collected from the vicinity of the tank will not indicate whether a leak has occurred from the piping leading to the tank, since the piping runs for approximately 30 feet beneath the building.

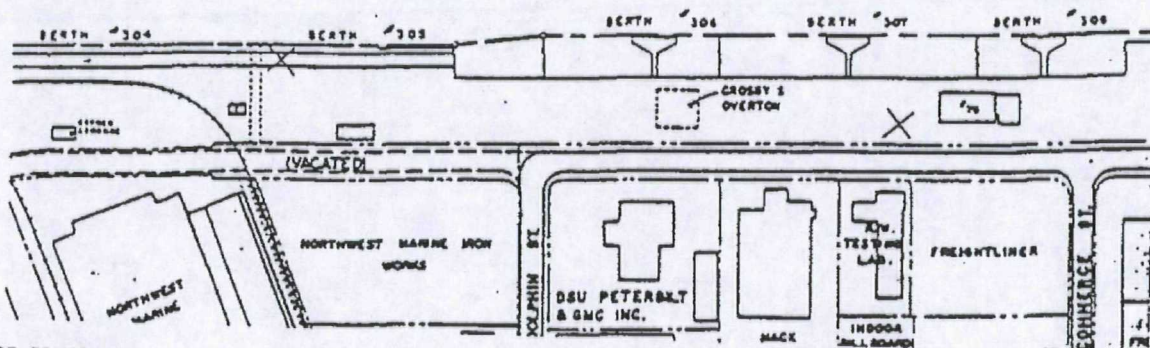
- 2) Test the soil in the area of the dark staining near the transformers for PCB content. Testing of transformer oil in the unmarked transformer may be desired in the event that the soil is found to contain PCBs, but is not considered necessary at this time.
- 3) Collect bulk samples of building materials suspected of containing asbestos. All asbestos-containing materials must be handled in a manner consistent with state and federal regulations.





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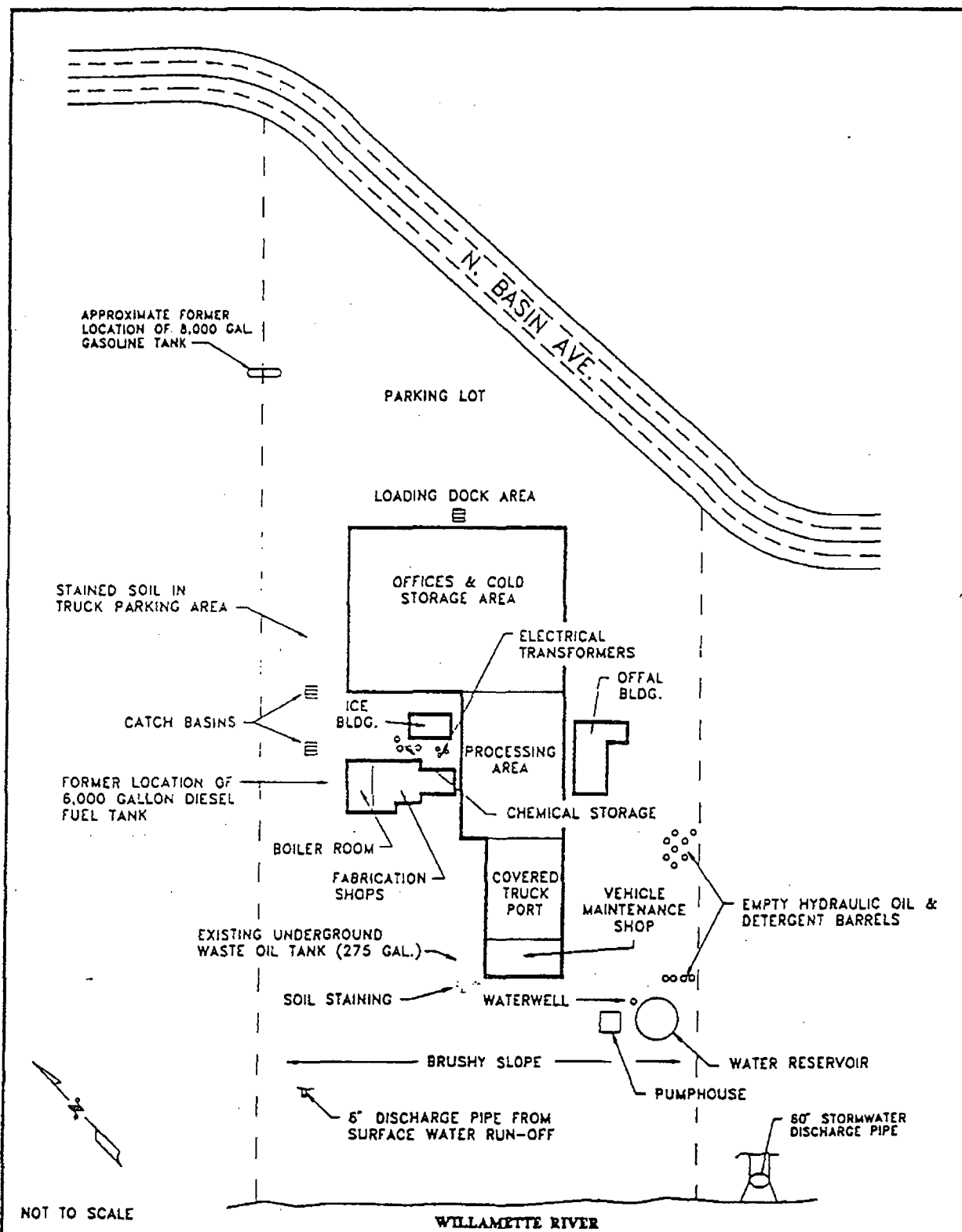
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SITE VICINITY PLAN
6135 N. BASIN AVE., SWAN ISLAND
LATHAM & WATKINS



1220 SW HOPKINSON
PORTLAND, OREGON
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SITE DETAIL PLAN

6135 N. BASIN AVE., SWAN ISLAND

LATHAM & WATKINS



1220 SW MORRISON
PORTLAND, OREGON
97205

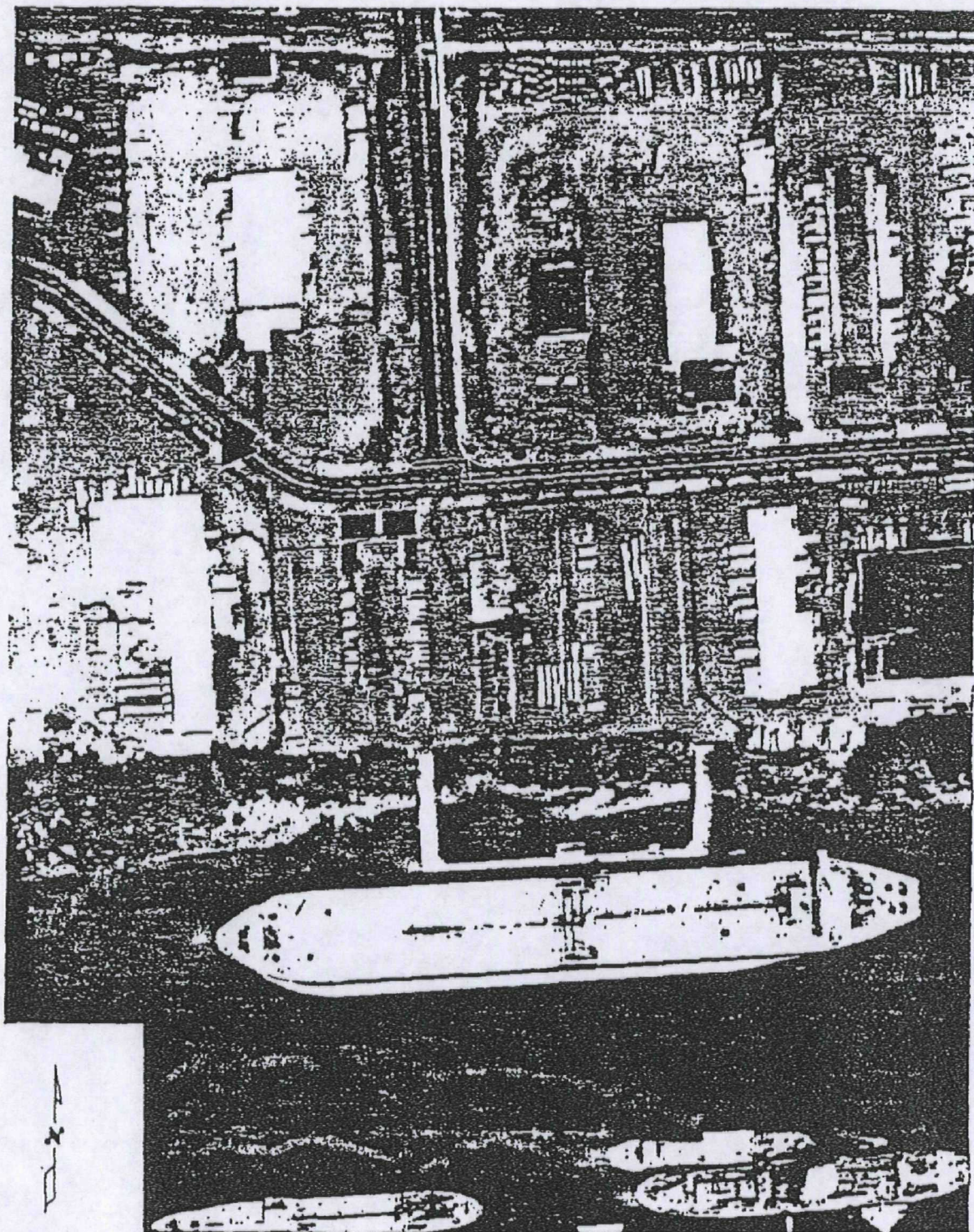
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AERIAL PHOTO (1983)

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LATHAM & WATKINS

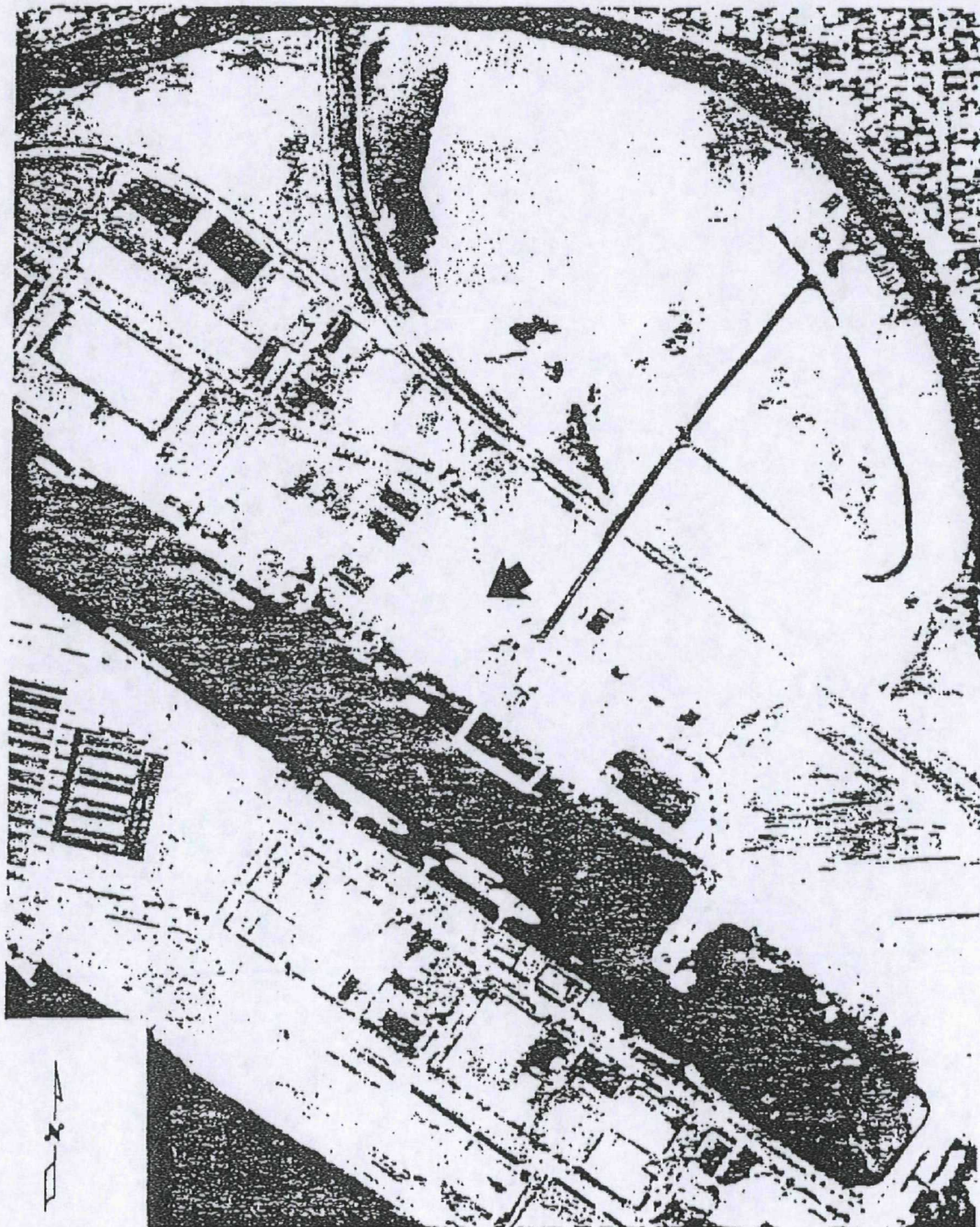


1220 SW MORRISON
PORTLAND, OREGON
97205
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1 OF 7

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AERIAL PHOTO (1982)
6135 N. BASIN AVE., SWAN ISLAND
LATHAM & WATKINS



1220 SW MORRISON
PORTLAND, OREGON
97205
503/740-1534
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2 OF 7

SECTION TWO

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AERIAL PHOTO (1970)

6135 N. BASIN AVE., SWAN ISLAND

LATHAM & WATKINS

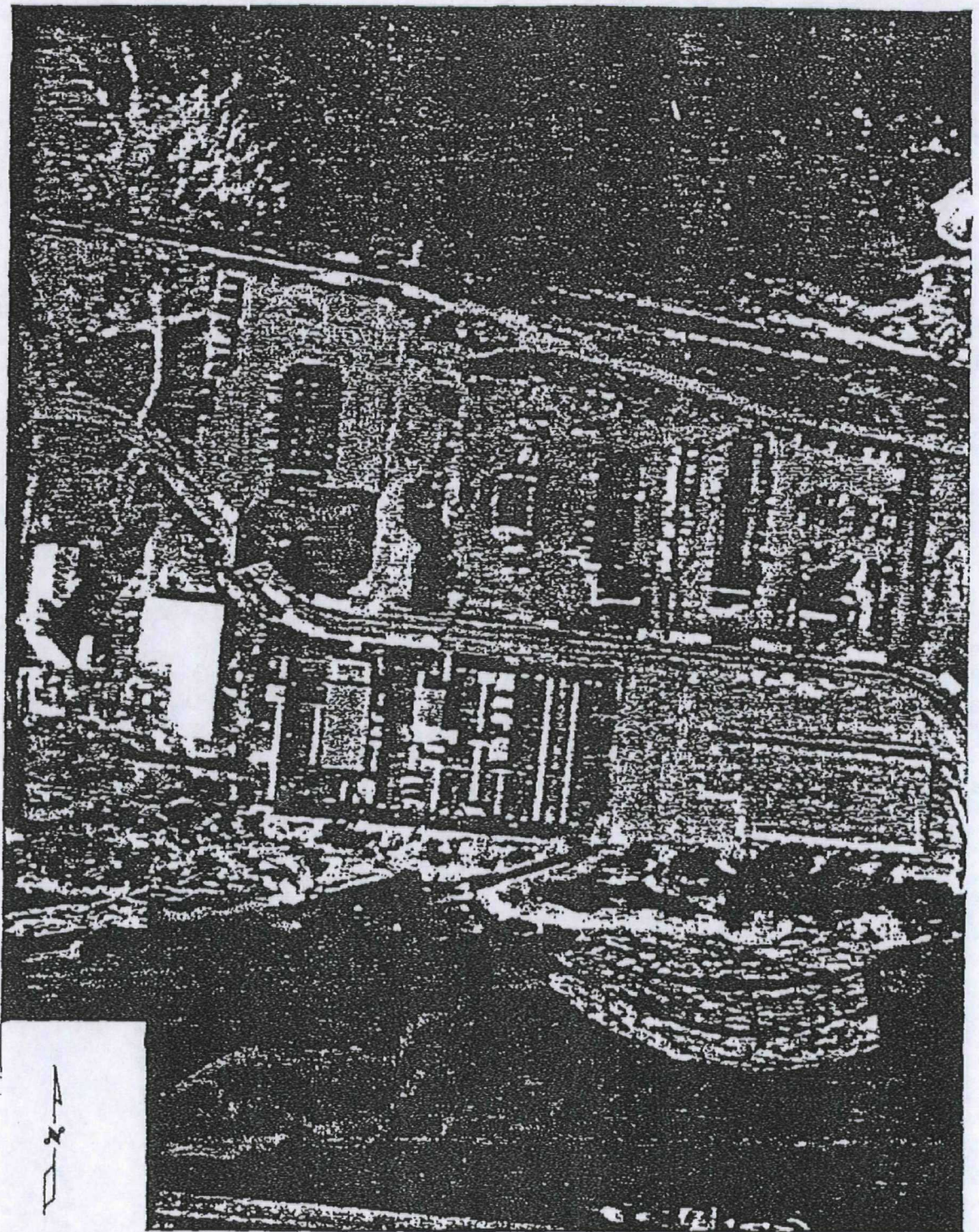


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PORTLAND, OREGON
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AERIAL PHOTO (1963)
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LATHAM & WATKINS

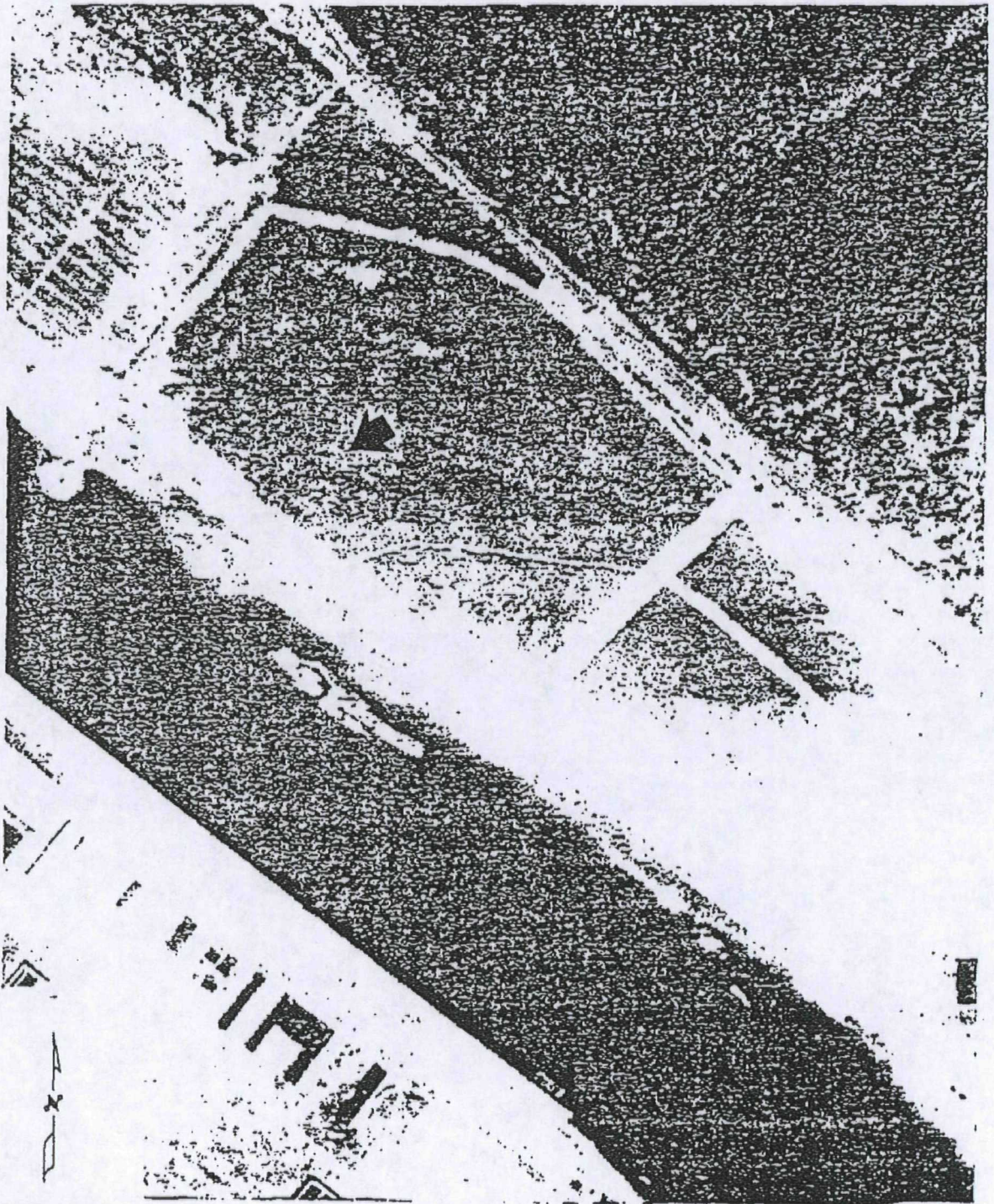


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4 OF 7

SECTION TWK

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AERIAL PHOTO (1955)
6135 N. BASIN AVE., SWAN ISLAND
LATHAM & WATKINS

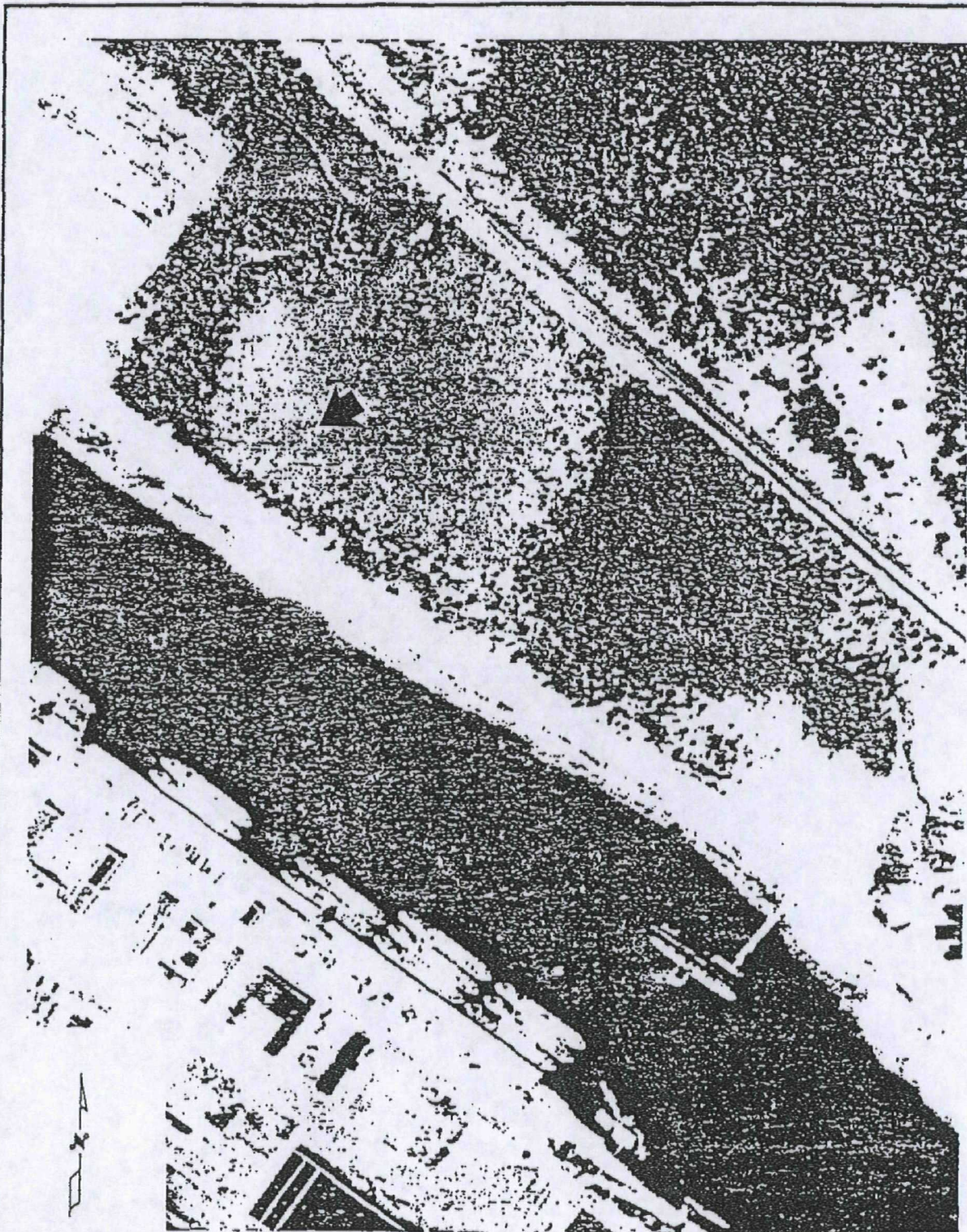


1220 SW MORNINGSIDE
PORTLAND, OREGON
97206
503/246-1536
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503/246-8223

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AERIAL PHOTO (1948)

6135 N. BASIN AVE., SWAN ISLAND

LATHAM & WATKINS

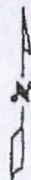
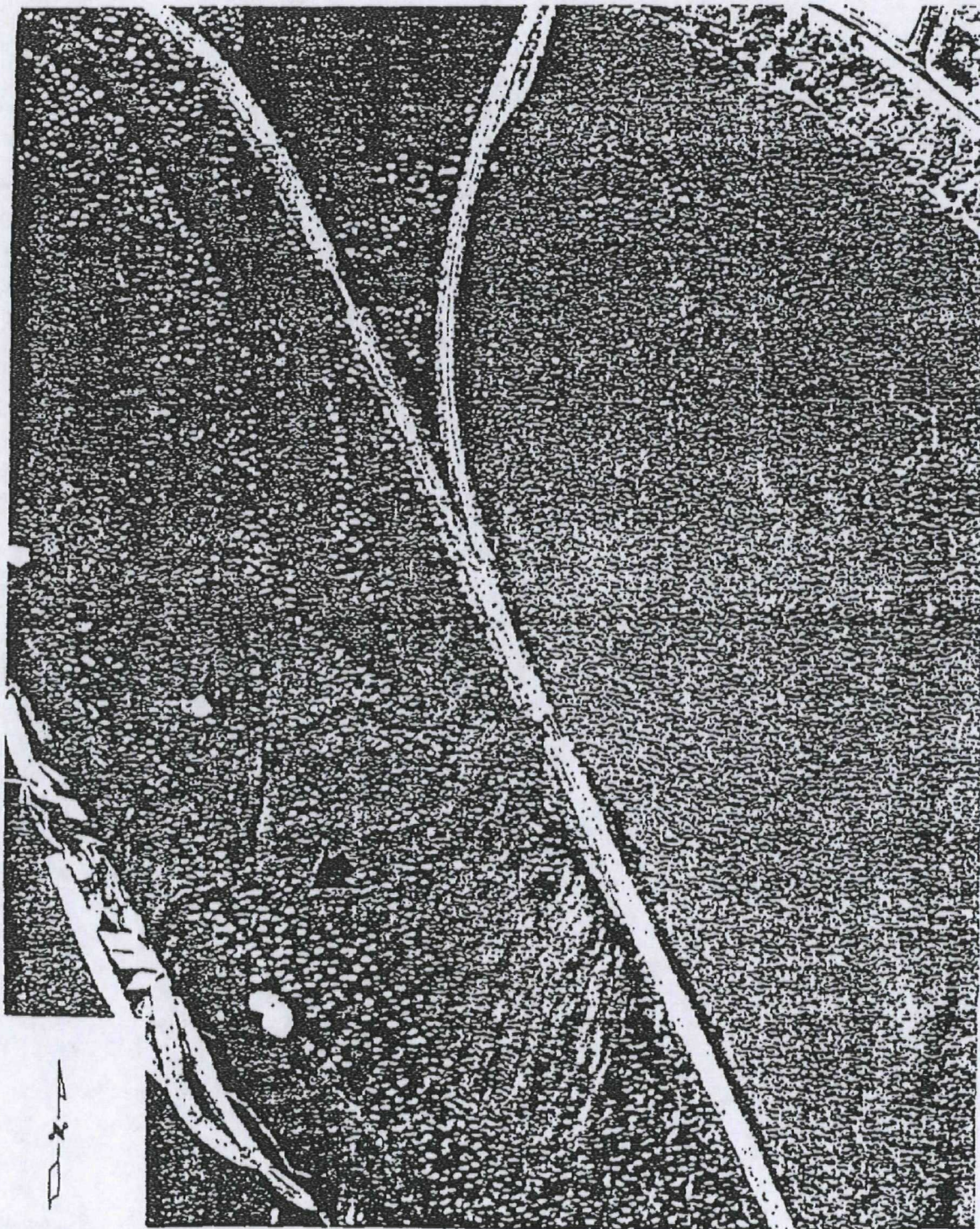


1220 SW MOPPIN RD
PORTLAND, OREGON
97206
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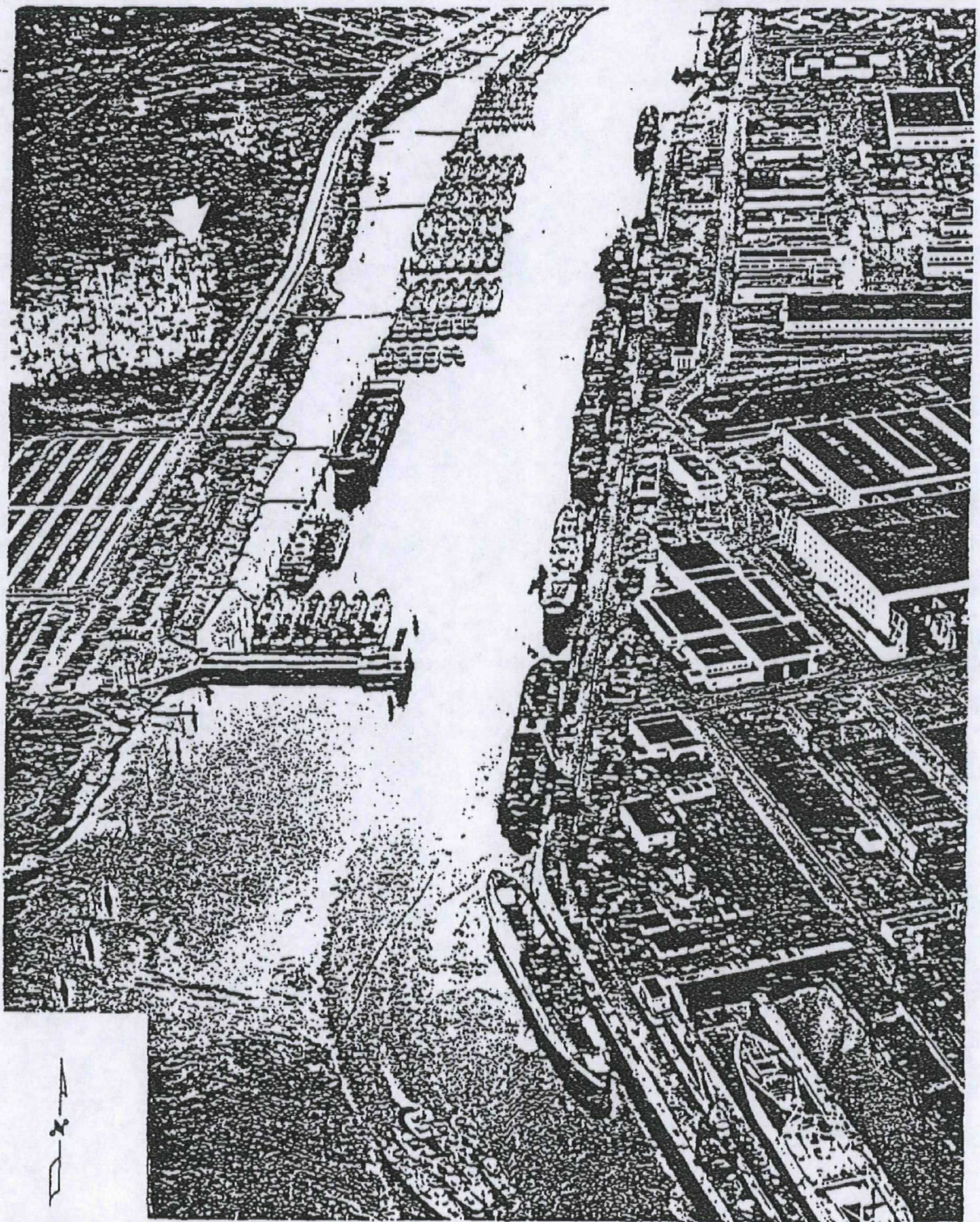
4912AIR7

AERIAL PHOTO (1936)
6135 N. BASIN AVE., SWAN ISLAND
LATHAM & WATKINS



1220 SW MORRISON
PORTLAND, OREGON
97205
503/246-1638
FAX
503/246-0253

7 OF 7
SECTION TW
2.7



NOT TO SCALE

4912.00

20MAY92

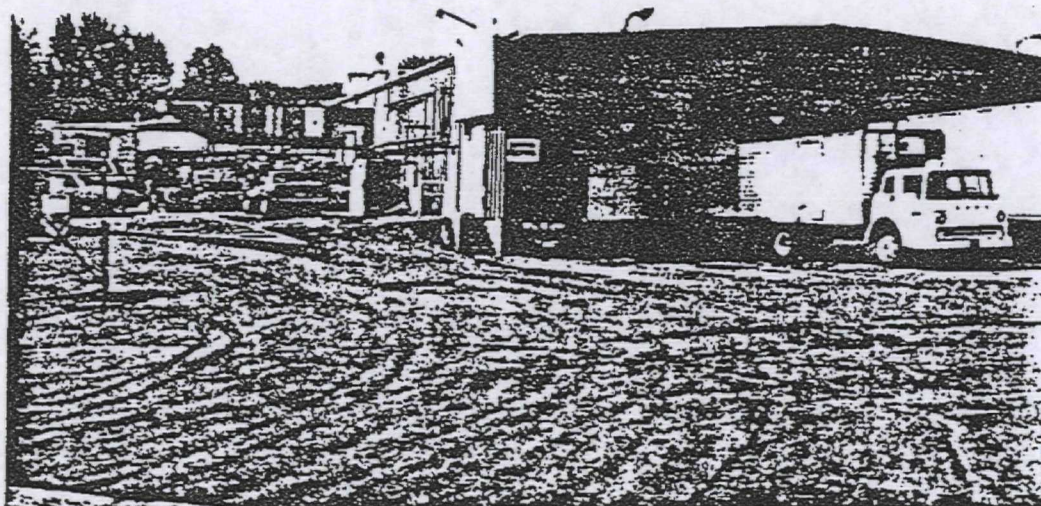
4912AIR6

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LATHAM & WATKINS

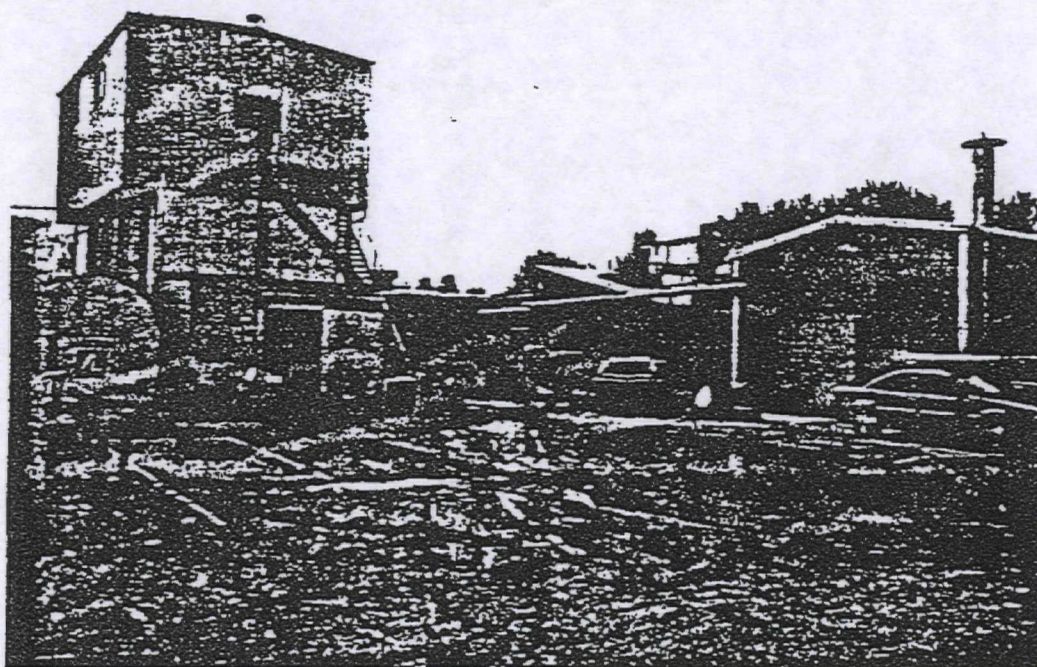


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PORTLAND, OREGON
97205
503/244-1838
FAX
503/244-0333

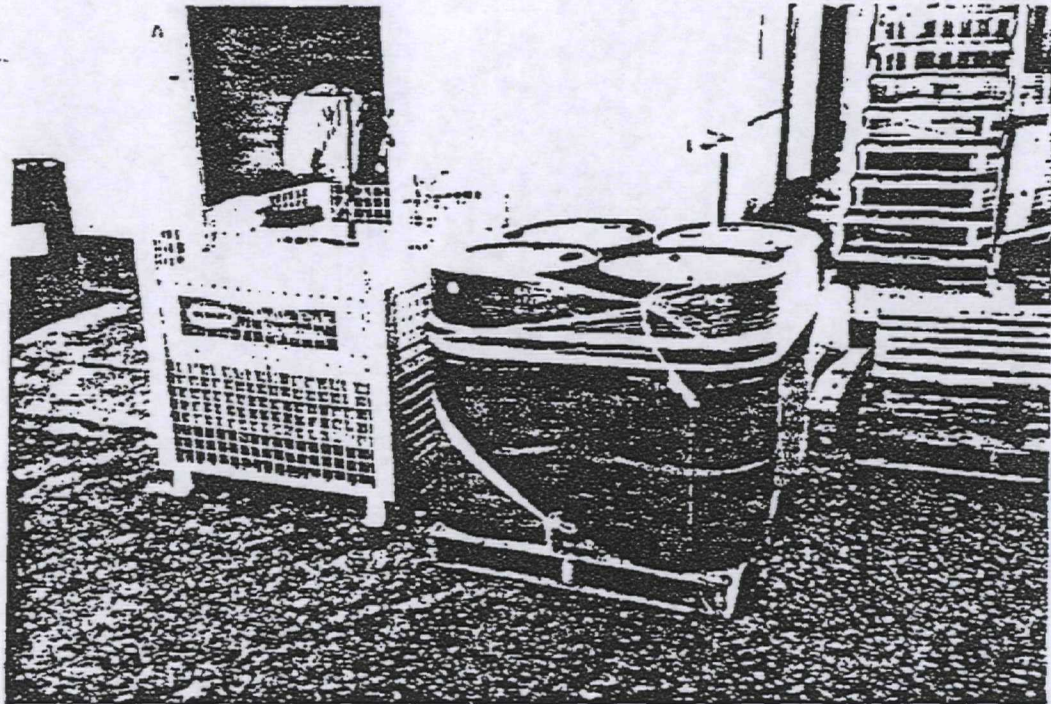
6 OF 7
SECTION TWO
2.8



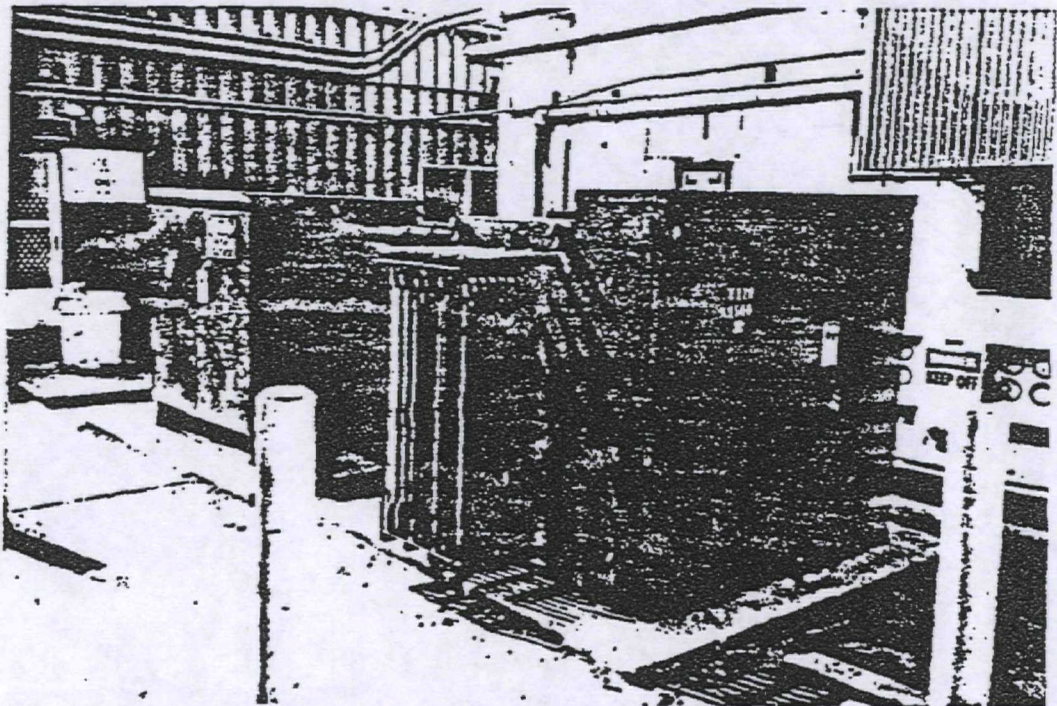
A: SUBJECT PROPERTY - EAST CORNER OF BUILDING



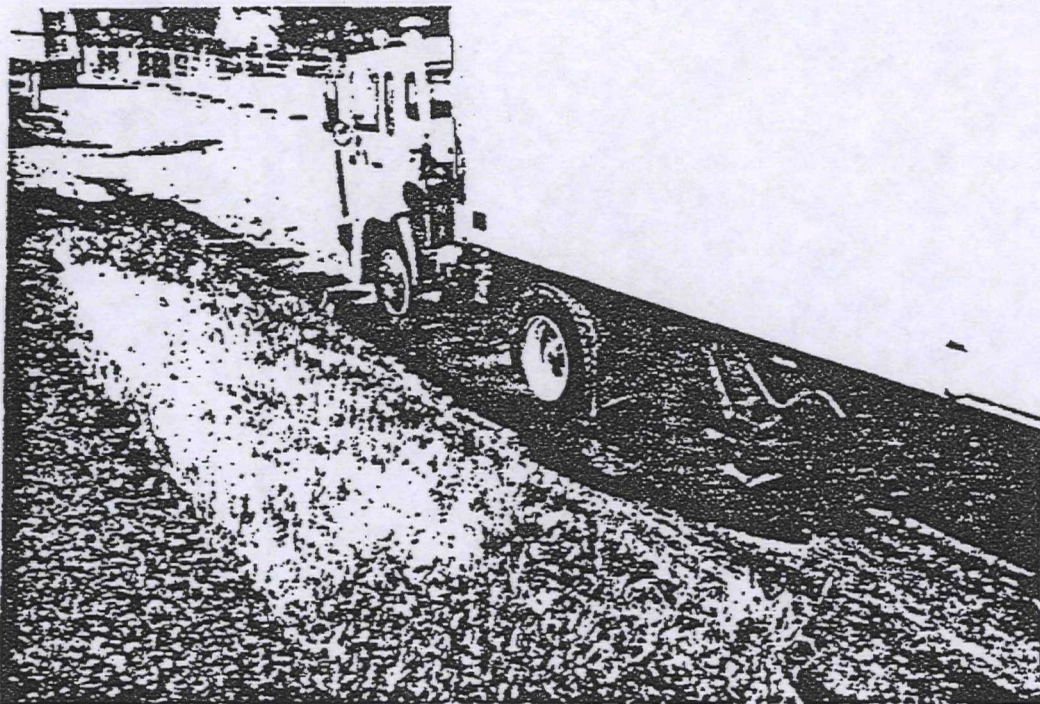
B: ICE HOUSE, FABRICATION SHOP AND BOILER ROOM - WEST SIDE OF BUILDING



A: STORED CLEANING MATERIALS NEAR ICE HOUSE; MATERIALS INCLUDE SODIUM HYDROXIDE, PHOSPHORIC ACID AND ALCOHOLS



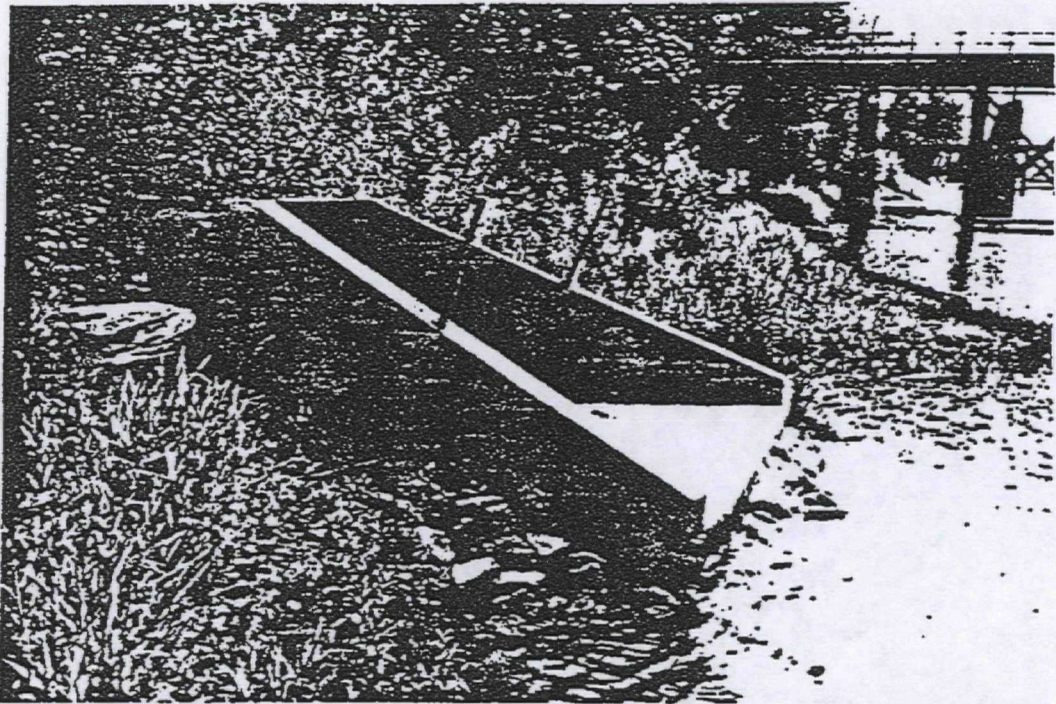
B: ELECTRICAL TRANSFORMERS NEAR ICE HOUSE; TRANSFORMERS SHOWN ARE LABELED "LESS THAN 48 PPM" AND "LESS THAN 1 PPM" (PCB's); UN-LABELED TRANSFORMER IS BEHIND



A: STAINED SOIL FROM FUEL LEAKAGE FROM TRUCKS - WEST SIDE OF PROPERTY



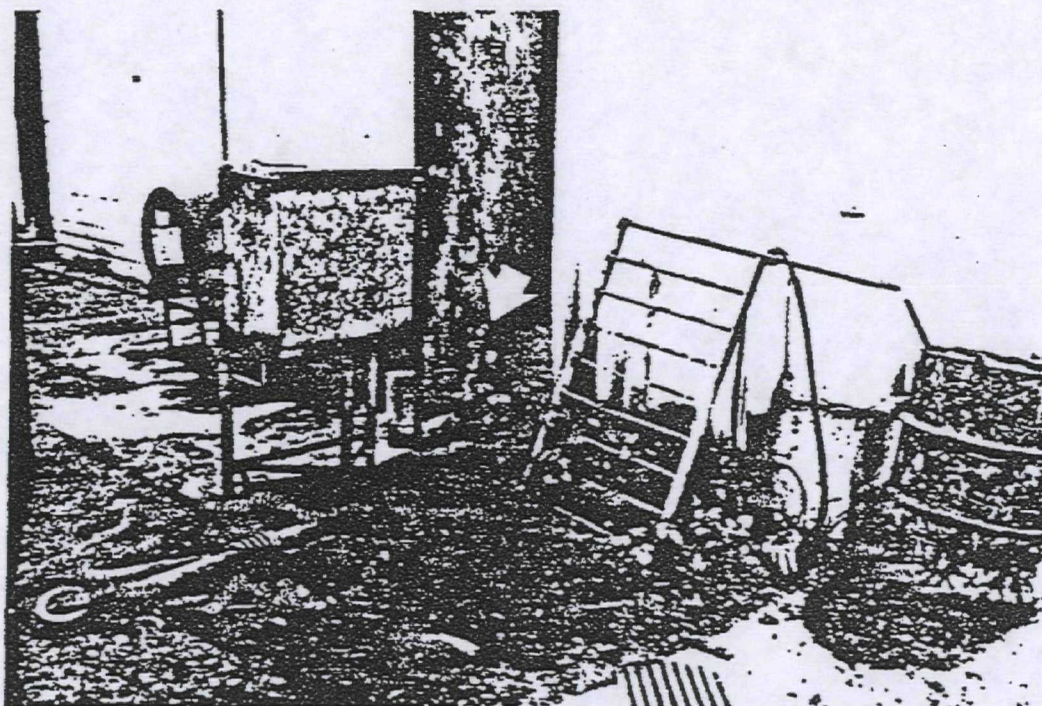
B: 6-INCH DISCHARGE PIPE FROM SURFACE-WATER RUNOFF; EMBANKMENT
NEAR RIVER



A: STORMWATER DISCHARGE CULVERT FROM SURFACE WATER RUNOFF;
DISCHARGES INTO SWAN ISLAND BASIN



B: WATER WELL, PUMPHOUSE, AND ABOVE-GROUND RESERVOIR - SOUTHEAST
CORNER OF PROPERTY



A: PIPE FROM WASTE OIL TANK FROM WHICH TANK IS PUMPED; NOTE DARK STAINING OF SOIL AROUND PIPE

DOCUMENTS REVIEWED

Sanborn Fire Insurance Maps: No information available

USGS 7.5 minute series topographic map: Portland Quadrangle (1961, photorevised 1984)

Federal (Environmental Protection Agency) and State (Department of Environmental Quality) files:

National Priority List, February 8, 1991

CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) inventory, December 2, 1991

Site Assessment Database Report, January 14, 1992

Underground Storage Tank Release records, January 15, 1992

Underground Storage Tank list, March 19, 1992

Oregon Hazardous Waste Handlers Notifying as Fully Regulated Generators, September 8, 1991

Oregon Hazardous Waste Handlers Notifying as Small Quantity Generators, September 8, 1991

State of Oregon Solid Waste Disposal Permit Mailing List, June 21, 1991

State of Oregon Closed Solid Waste Disposal Permits, November 7, 1990

State of Oregon Closure & Regular Solid Waste Active Disposal Permits, May 10, 1991

Oregon Department of Geology & Mineral Industries, Portland Area Subsurface Database (1988).

University of Oregon Map Library: Aerial Photographs

PUBLICATIONS

Madin, I.P., 1989, Earthquake Hazard Geology Maps of the Portland Area, Oregon, Dept. of Oregon Geol. and Min. Ind., Open File Report 0-90-2, 21 p.

Portland City Directories: list years.

PERSONAL COMMUNICATIONS

Robert Weiner	Controller - Lynden Farms	May 11 & 26, 1992
Joe Delk	Head Mechanic - Lynden Farms	May 11, 1992
Sheila Monroe	Oregon DEQ - NW Region	May 21, 1992
Kirsten Hierhofer	Oregon DEQ - Water Quality	May 21, 1992

LATHAM & WATKINS

APPENDIX A
REGULATORY REVIEW SECTION

6135 N. BASIN AVE

U.S. EPA CERCLIS SITES LIST

NAME	LOCATION
USDOT-CG Marine Safety Station	6767 N Basin Ave
Mock's Bottom	N of Swan Island
Fred Meyer-Swan Island	3140 N Webster St
Crosby & Overton	Bldg 9 Swan Island

The above listing includes all those sites included in state and federal files within a one-mile radius of the subject property. Sites listed in bold print are discussed in the Regulatory Review of this report. The locations of all sites have not been field-verified by PBS. The names of lists searched are included in the Reference Section of this report.

6135 N. BASIN AVE

Appearance in this list neither confirms nor denies the release of a hazardous substance at the facility; nor does it indicate whether or not the facility is contaminated or cleanup is necessary, currently under way or completed.

SITE ASSESSMENT DATABASE

NAME	LOCATION	SITE ID
Crosby & Overton	Bldg 9 - Swan Island	NWR 877
Farmer's Union Central Exchange	5617 N Basin Ave	NWR 260
Fred Meyer - Swan Island	3205 N Webster	NWR 44
Freightliner Corp.	5400 N Basin Ave	NWR 115
Interstate Battery Bldg	3166 N Greeley	NWR 935

The above listing includes all those sites included in state and federal files within a one-mile radius of the subject property. Sites listed in bold print are discussed in the Regulatory Review of this report. The locations of all sites have not been field-verified by PBS. The names of lists searched are included in the Reference Section of this report.

6135 N. BASIN AVE

DEQ UST CLEANUP LIST

LOG NUMBER	LOCATION	ADDRESS
26-90-0028	Harris Shell Station	4510 N Lombard
26-90-0490	Harris Enterprises, Inc.	4510 N Lombard
26-89-0065	PIE Nationwide	5550 N Basin Ave
26-89-0101	Pacific Detroit Diesel Allison	5940 N Basin Ave
26-89-0152	Oregon Freightways	5949 N Basin Ave
26-89-0166	Portland Ship Repair Yard	5555 N Channel Ave
26-89-0233	Cummins Northwest	4711 N Basin Ave
26-90-0052	Tyler-Dawson Supply Co	5051 N Lagoon
26-90-0165	Dallas & Mavis Forwarding Co.	6220 N Basin Ave
26-90-0506	Fred Meyer, Inc.	3141 N Webster

The above listing includes all those sites included in state and federal files within a one-mile radius of the subject property. Sites listed in bold print are discussed in the Regulatory Review of this report. The locations of all sites have not been field-verified by PBS. The names of lists searched are included in the Reference Section of this report.

6135 N. BASIN AVE

PERMITTED UNDERGROUND STORAGE TANKS WITHIN STUDY AREA

FACILITY	LOCATION	PERMITTED TANKS	ACTIVE TANKS	DECOM. TANKS
Harris Enterprises, Inc	4510 N Lombard	4		4
Hudson 153	4535 N Lombard	3	3	
University of Portland	5000 N Willamette	1	1	
Astro #253	2809 N Portland Blvd	3	3	
Automatic Vending Co	5001 N Lagoon	6		6
Bess Kaiser Medical Center	5055 N Greeley	1	1	1
Boise Cascade Office Products	4660 N Channel			1
C.H. Murray, Inc.	5565 N Dolphin St	1		1
Cenex Ag Inc.	6147 N Basin Ave	2		2
Chevron USA 96949	3515 N Lombard	7	5	2
Crosby & Overton	5420 N Lagoon			1
Cummins Northwest	4711 N Basin Ave			3
Dallas & Mavis Forwarding Co.	6220 N Basin Ave	2		2
DSU - Peterbilt & GMC, Inc.	4810 N Basin Ave	4	4	
DSU - Peterbilt & GMC, Inc.	5555 N Lagoon	4	4	1
Express Lube	3436 N Lombard	1	1	
Food Services of America	3140 N Webster	2		3
Fred Meyer, Inc.	3140 N Basin Ave			2
Fred Meyer, Inc.	3141 N Webster	2		2
Freightliners Corp.	4747 N Channel	1	1	
HNF Properties, Inc.	5300 N Channel	1		1
Island Holdings, Inc.	5617 N Basin Ave	1	1	
Island Holdings, Inc.	5617 N Basin Ave	1	1	
Lynden Farms	6135 N Basin Ave	2		2
Metrofueling	5000 N Basin Ave	4	4	
NW Testing Labs	5405 N Lagoon Ave	1		1
NW Transport Service	6100 N Basin Ave	3	3	
PIE Nationwide, Inc.	5550 N Basin Ave	8		8
Pacific Detroit Diesel Allison	5061 N Lagoon	2		2
Pacific Detroit Diesel Allison	5940 N Basin Ave	4		4
Portland Ship Repair Yard	5555 N Channel	2		2
Portland Ship Repair Yard	5555 N Channel	7	3	9
Portland Unloading	PO Box 2843 (Swan Island)	2		2
Roadway Express, Inc.	5820 N Basin Ave	5	3	10
Sears, Roebuck & Co.	5230 N Basin Ave			3
Swan Island Fred Meyer	5000 N Basin Ave	2	2	
Swan Island Milne Truck Lines	5949 N Basin Ave			1
Tyler-Dawson	5051 N Lagoon			6
United Parcel Service	6707 N Basin Ave	6	6	
United States Navy	6735 N Basin Ave		5	
USCG Marine Safety Office	6757 N Basin Ave	3	3	
Western Mack Sales & Service	5411 N Lagoon	1		1

The above listing includes all those sites included in state and federal files within a one-mile radius of the subject property. Sites listed in bold print are discussed in the Regulatory Review of this report. The locations of all sites have not been field-verified by PBS. The names of lists searched are included in the Reference Section of this report.

6135 N. BASIN AVE

OREGON HAZARDOUS WASTE HANDLERS NOTIFYING AS
FULLY REGULATED GENERATORS

NAME	LOCATION
Dallas & Mavis Forwarding Co.	6220 N Basin Ave
Freightliner Corporation	5400 N Basin Ave
NW Marine Iron Works	6000 N Channel Ave
Norvac Services, Inc.	5555 N Channel, Bldg 10
Pacific Intermountain Express	5550 N Basin Ave
US Coast Guard	6767 N Basin Ave

The above listing includes all those sites included in state and federal files within a one-mile radius of the subject property. Sites listed in bold print are discussed in the Regulatory Review of this report. The locations of all sites have not been field-verified by PBS. The names of lists searched are included in the Reference Section of this report.

6135 N. BASIN AVE

OREGON HAZARDOUS WASTE HANDLERS NOTIFYING AS
SMALL QUANTITY GENERATORS

NAME	LOCATION
Advanced Finishing Systems, Inc.	2304 N Killingsworth
Boise Cascade Research & Development	4435 N Channel
Cascade General, Inc.	5555 N Channel, Bldg 71
Chempro Portland	5420 N Lagoon
Automatic Vending	5001 N Lagoon
Cummins NW, Inc.	4711 N Basin Ave
DSU Peterbilt GMC, Inc.	5555 N Lagoon
Milne Truck Lines, Inc.	5949 N Basin Ave
Northwest Testing Lab	5405 N Lagoon
Pacific Detroit Diesel Allison	5061 N Lagoon
Pacific Detroit Diesel Allison	5940 N Basin
Tri-west Supply Company	6650 N Basin, #2
United Parcel Service	6707 N Basin
West State, Inc.	5555 N Channel, Bldg 72

The above listing includes all those sites included in state and federal files within a one-mile radius of the subject property. Sites listed in bold print are discussed in the Regulatory Review of this report. The locations of all sites have not been field-verified by PBS. The names of lists searched are included in the Reference Section of this report.

6135 N. BASIN AVE

STATE OF OREGON
SOLID WASTE DISPOSAL PERMIT MAILING LIST

PERMIT NO.	FACILITY NAME	FACILITY CLASS	PERMITTEE
------------	---------------	----------------	-----------

None listed.

The above listing includes all those sites included in state and federal files within a one-mile radius of the subject property. Sites listed in bold print are discussed in the Regulatory Review of this report. The locations of all sites have not been field-verified by PBS. The names of lists searched are included in the Reference Section of this report.

6135 N. BASIN AVE

STATE OF OREGON
CLOSED SOLID WASTE DISPOSAL FACILITIES

FACILITY I.D.	COMMON NAME/ SECT/TOWN/RANGE	FACILITY TYPE	PERMIT TYPE
---------------	---------------------------------	---------------	-------------

None listed.

The above listing includes all those sites included in state and federal files within a one-mile radius of the subject property. Sites listed in bold print are discussed in the Regulatory Review of this report. The locations of all sites have not been field-verified by PBS. The names of lists searched are included in the Reference Section of this report.

6135 N. BASIN AVE

STATE OF OREGON
CLOSURE AND REGULAR SOLID WASTE
ACTIVE DISPOSAL FACILITIES

FACILITY I.D.	COMMON NAME/ SECT/TOWN/RANGE	FACILITY TYPE	PERMIT TYPE
---------------	---------------------------------	---------------	-------------

None listed.

The above listing includes all those sites included in state and federal files within a one-mile radius of the subject property. Sites listed in bold print are discussed in the Regulatory Review of this report. The locations of all sites have not been field-verified by PBS. The names of lists searched are included in the Reference Section of this report.

6135 N. BASIN AVE

NATIONAL PRIORITY LIST
SUPERFUND SITES IN THE PACIFIC NORTHWEST
EPA REGION 10

SITE NAME

CITY

COUNTY

None listed.

The above listing includes all those sites included in state and federal files within a one-mile radius of the subject property. Sites listed in bold print are discussed in the Regulatory Review of this report. The locations of all sites have not been field-verified by PBS. The names of lists searched are included in the Reference Section of this report.

6135 N. BASIN AVE

6135 N. Basin

Address 6135 N. Basin Permut 02-3668

City _____ Bldg _____ Add _____

Owner Western Farmers Feed Mill

Contractor A-1 Sanitation

Stories and class of building Old feed mill

Water Closets _____ Hot-Water Tank _____ Cesspool _____

Bath, Shower _____ Auto. Cl. Washer _____ Conn. Cesspool _____

Bath Tub _____ Auto. Dishwasher _____ Dry Well _____

Basins _____ Drain Floor _____ Conn. Drywell _____

Sinks _____ Drain Area _____ Conn. Sewer 600"

Laundry Trays _____ Rain Drains _____ Storm Sewer _____

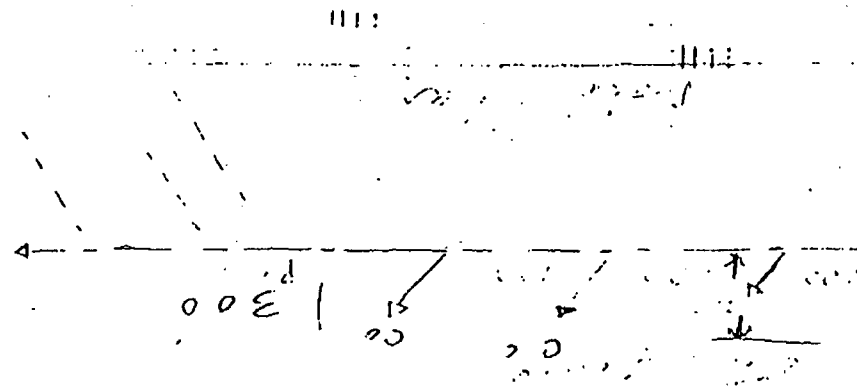
Bldg. Pmt. _____ Water Ser. _____ Catch-Basins _____

Remarks _____

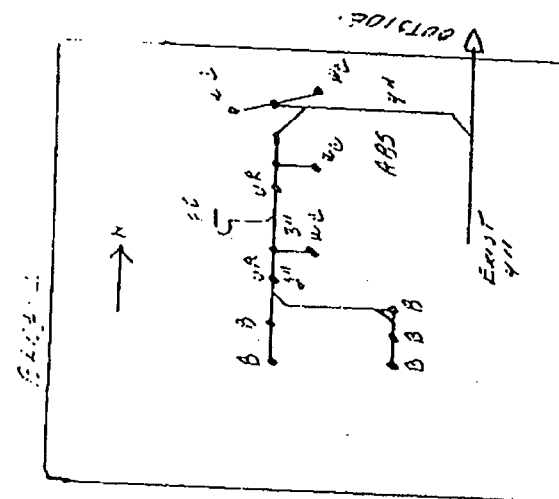
Date of First Inspection 5-27-80 Date of Final Inspection 5-27-80

Inspector _____ Inspector _____

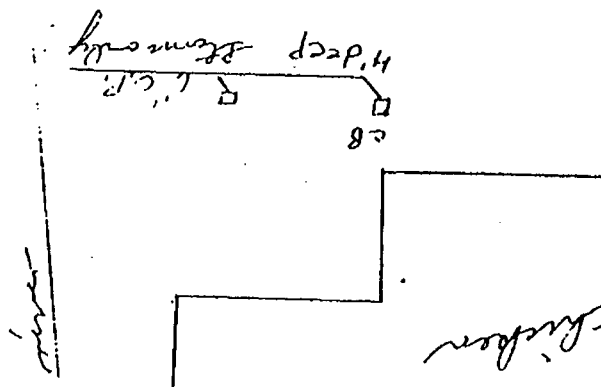
0000



ADDRESS REPORT OF PLUMBING INSPECTION
 Address 6135 N. Basin Permit 51172
 City Blk Add
 Owner E D S Properties
 Contractor Anctil Plumbing
 Stories and class of building old one story commercial
 Water Closets 4N Hot-Water Tank 1N Cesspool
 Bath, Shower Auto. Cl. Washer Conn. Cesspool
 Bath Tub Auto. Dishwasher Dry Well
 Basins 5N Drain Floor 1N Conn. Drywell
 Sinks Drain Area Conn. Sewer
 Laundry Trays Rain Drains Storm Sewer
 Bldg. Pmt. Water Ser. Catch-Basins
 Remarks 2N urinals
 Date of First Inspection 4-1-55 Date of Final Inspection 6 May 85
 Inspector John J. Jellum Inspector



BUREAU OF PLUMBING INSPECTION
 ADDRESS REPORT OF PLUMBING INSPECTION Date 10-18-71
 Address 6135 North Basin Street Permit 174268
 City Blk Add
 Owner Western Farmers Assoc.
 Contractor Copenhagen Inc.
 Stories and class of building
 Water Closets Hot-Water Tank Cesspool
 Bath, Shower Auto. Clothes Washer Septic Tank
 Bath Tub Auto. Dishwasher Dry Well
 Basins Drain Floor Water Service
 Sinks Drain Area Connect to Sewer
 Laundry Trays Rain Drains Cesspool, Septic Tank
 Water Permit Bldg. Pmt. Sewer Permit
 Remarks 6" catch basin 1
 Date of First Inspection 3-28-71 Date of Final Inspection
 Inspector G. Angell Inspector



Catch basin located
 on north side of
 chicken plucker
 factory - sewer to
 main 6" line.

BUREAU OF BUILDINGS
REPORT OF PLUMBING INSPECTION Date 3-13-72
Address 6135 North Basin Street Permit 176816
Blk. Add.
Owner Western Farmers Assoc.
Contractor Copenhagen Inc.
Stories and class of building
Water Closets Hot Water Tank Cesspool
Bath, Shower Auto. Clothes Washer Septic Tank
Bath Tub Auto. Dishwasher Dry Well
Basins Drain Floor Water Service
Sinks Drain Area Connect to Sewer
Laundry Trays Rain Drains Cesspool, Septic Tank
Water Permit Bldg. Pmt. Sewer Permit
Remarks reduced pressure backflow
preventer 1,
Date of First Inspection 3-20-72 Date of Final Inspection 3-24-72
Inspector J. Engell Inspector

BUREAU OF BUILDINGS
REPORT OF PLUMBING INSPECTION Date 10-12-88
Address 6135 N Basin Permit 186238
Owner Lynden Farms
Contractor Modern Plbg.
Stories and Class of Building Pump House
Water Closets Hot Water Tank Conn. Cesspool
Shower Auto Cl. Washer Seepage Trench
Bath Tub Auto Dishwasher Dry Wells
Basins Service Sinks Conn. Sewer
Kitchen Sink Urinals Conn. Storm 60' \$33.00
Disposal Fountains Sewer Cap
Laundry Tray Floor Drain 1-2 Catch Basin
Heat Pump Area Drain Heat Exchanger
Water Service Rain Drains Solar Panel
Remarks 1 fixture \$12.00 Rec. to Main
Date of Copy Inspection 1-10-89 Date of Final Inspection 12-5-88
Inspector W. Brown Inspector

PRIVILEGED AND CONFIDENTIAL

UPDATE TO THE ENVIRONMENTAL
SITE ASSESSMENT OF LYNDEN FARMS
6135 NORTH BASIN AVENUE
PORTLAND, OREGON

APRIL 29, 1993

Prepared for:

LATHAM & WATKINS, ATTORNEYS AT LAW
633 West Fifth Street, Suite 4000
Los Angeles, California 90071-2007

Prepared by:

McLAREN/HART ENVIRONMENTAL ENGINEERING
11101 White Rock Road
Rancho Cordova, California 95670

Job Number: 01.0600696



McLarensm
Hart

ENVIRONMENTAL ENGINEERING CORPORATION



PRIVILEGED AND CONFIDENTIAL

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AND FREIGHTLINER

1.0 INTRODUCTION

As authorized by Latham & Watkins and in accordance with McLaren/Hart's proposal dated February 17, 1993, the Environmental Consulting Agreement between the Morf Family Trust and McLaren/Hart dated February 26, 1993, and the March 17, 1993, verbal scope modification authorized by Mr. James Arnone, an environmental assessment update for property located at 6135 N. Basin Avenue in Portland, Oregon has been completed. The objective of the update was to identify potential environmental impacts associated with the subject property since completion of the *Environmental Property Assessment for the Property located at 6135 N. Basin Avenue* by PBS Environmental, dated May 1992, and a letter report documenting the results of soil sampling and analyses performed at the property dated July 6, 1992, also by PBS Environmental.

This update was conducted in March and April of 1993 and consisted of: an inspection of the property including interviews and facility file review (see Section 4.0); a review of historical aerial photographs (see Section 5.0); a search of agency databases to identify nearby sites that may environmentally impact the subject property (see Section 6.1); and agency interviews and file reviews to obtain an updated status of activities at the subject property and nearby properties of potential concern (see Section 6.2). Conclusions presented in this update (see Section 7.0) were based on the 1992 PBS environmental investigations and information summarized in this report.

2.0 OBJECTIVE AND LIMITATIONS

The objective of the assessment update was to identify potential environmental impacts associated with the subject property since completion of the *Environmental Property Assessment for the Property located at 6135 N. Basin Avenue* by PBS Environmental, dated May 1992, and a letter report documenting the results of soil sampling and analyses performed at the property dated July 6, 1992, also by PBS Environmental. The assessment update was intended to compile sufficient information from readily available sources to confidently determine if significant problems may be present.

Conclusions drawn and recommendations provided in this report are subject to limitations imposed by the available information. The assessment update did not include environmental sampling, asbestos sampling, comprehensive hydrogeologic (including wetlands) characterization, air quality determination, or potential flood hazard evaluation.

3.0 PROPERTY OVERVIEW

The subject property was located at 6135 N. Basin Avenue, in an industrial portion of north Portland known as Mock's Bottom (see Figure 1, Appendix A). The property was assessor's parcel number R94117-1290 and was 5.72-acres in size. Mr. Roger Morf was the owner of the property, and Belozor Farms, Inc., owned the machinery and equipment. The property was occupied by Lynden Farms and was used as a poultry processing plant.

Nine buildings existed on the property: the main building which included the processing area, storage areas and offices; an ice house (building) with an attached chemical storage room; a boiler room; two engine rooms; two maintenance shops; a pumphouse; and an offal building in which process water and chicken wastes were collected for disposal and/or reuse (see Figure 2). Additional features included a water well and 36,000-gallon water reservoir; an office trailer; a loading dock; and a covered truck port.

4.0 PROPERTY INSPECTION

The site inspection was completed by Ms. Barbara L. Ceran, an Asbestos Hazard Emergency Response Act (AHERA) certified inspector, on March 16, 1993. The inspection included employee interviews and a review of available facility files. Mr. Michael McCullaugh, Lynden Farms Plant Operations Manager, Mr. Jim Kluver, Lynden Farms Plant Engineer, and Ms. Jody Bogden, Lynden Farms Quality Control Supervisor, accompanied Ms. Ceran during the site inspection and provided access into the buildings. The exterior areas of the property were inspected by walking along property boundaries and between and around structures.

Employee interviews were conducted by Ms. Ceran during the site inspection and by telephone prior to, and subsequent to, the site inspection (see Table 1, Appendix B). Mr. McCullaugh, Mr. Kluver, Ms. Bogden and Mr. Joe Delk, member of Lynden Farms maintenance staff, were interviewed.

Copies of Lynden Farms files were provided to McLaren/Hart by Latham & Watkins and by Mr. McCullaugh (see Appendices C and D). The files generally consisted of permit documentation and Lynden Farms' correspondence with Latham & Watkins, PBS and regulatory agencies.

General operations and activities conducted at the property were similar to those documented in the 1992 assessment. However, two buildings (engine rooms) observed during McLaren/Hart's inspection were not identified in the 1992 report

PRIVILEGED AND CONFIDENTIAL

(although they existed on the property at that time), and areas along the eastern property boundary reportedly occupied by "empty hydraulic oil & detergent barrels" were occupied by wooden pallets, empty bird cages and parked vehicles.

Eight potential environmental concerns identified during the 1992 site inspection and/or addressed by the 1992 soil sampling consisted of: an underground waste oil tank; stained soil adjacent to a transformer; waste and surface water discharge (although no specific items of concern were identified in the report); hazardous materials storage, including a barrel storage area and chemical storage room; dredged fill material from the Swan Island Basin; potential asbestos-containing building materials; and stained soil in a pipe trench located in the boiler room (see Appendices C and E). The status of these potential concerns is discussed in Sections 4.1. through 4.6.

Ten additional potential environmental concerns were identified during McLaren/Hart's inspection. These items consisted of: elevated biological oxygen demand (BOD) and total suspended solids (TSS) levels in waste water and damaged underground piping in the storm drain system (see Section 4.3); petroleum releases adjacent to 55-gallon drums of oil stored directly on the soil (see Section 4.4.4); a former 8,000-gallon underground gasoline tank (see Section 4.7); petroleum releases adjacent to a storm drain at a truck parking area (see Section 4.8); petroleum releases in the engine room located east of the boiler room (see Section 4.9); petroleum releases adjacent to an oil/water separator (see Section 4.10); petroleum releases and floor drains in the maintenance shop (see Section 4.11); a waste oil sump, underground piping and petroleum releases in the truck maintenance shop (see Section 4.12); a petroleum release west of the engine room for the chiller (see Section 4.13); and underground diesel tanks formerly located on the Cenex property (see Section 4.14).

Potential environmental concerns identified by PBS and McLaren/Hart are summarized in Table 2 (Items 1 through 18) and shown on Figure 3. Site inspection photographs of the identified concerns are provided in Appendix F.

4.1 Underground Waste Oil Tank (Item 12)

The 1992 report indicated that an underground waste oil tank located near the truck maintenance shop was not permitted by the Oregon Department of Environmental Quality (DEQ), and had not been tightness-tested. The 1992 investigations included an attempt to collect a soil sample adjacent to the tank, however, the sampling equipment (hand auger) met refusal at six inches below the ground surface due to the presence of a concrete slab. No sample was collected at this location.

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Current status of the tank was provided by Mr. Kluver. According to Mr. Kluver, the underground tank has a capacity of 275-gallons; was installed in about 1982; and was still in operation at the time of the facility inspection. A review of DEQ files indicated that both an application for an underground tank permit and a notice to decommission the tank were completed by Lynden Farms on August 4, 1992. DEQ records listed the waste oil tank as active but not permitted. There is no indication that the tank has been monitored for spills or leaks.

The McLaren/Hart inspection identified an additional concern associated with the waste oil tank. A petroleum release covering approximately six square feet of soil was observed adjacent to a pipe used both for removing the waste oil and as a vent for the tank. The petroleum staining extended to a nearby storm drain.

4.2 Staining Adjacent to a Transformer (Item 7)

According to the 1992 report, staining was observed near one of the pad-mounted transformers (north of an engine room). The size of the stain was not documented in the report and the source of the staining was not determined. During the 1992 investigations, two soil samples were collected from beneath stained areas of the asphalt adjacent to the transformer. The samples were analyzed for PCBs. Test results indicated no detectible levels of PCBs in the samples collected. (The detection limit was not documented in the 1992 report.)

During McLaren/Hart's inspection, approximately 20 square feet of petroleum staining was observed near the transformers. No staining was observed on the base of the transformers and the source of the staining is still unknown.

4.3 Waste and Surface Water Discharge (Items 2, 6, 12, 17)

According to the 1992 report, "discharges of surface and waste waters appeared to be in accordance with all applicable regulations." The 1992 report did not reference an industrial waste water permit (see Section 4.3.1) or a general stormwater permit required under the Federal Clean Water Act, National Pollutant Discharge Elimination System (NPDES) (see Section 4.3.2).

4.3.1 Waste Water Discharge

A review of facility files indicated that The City of Portland Industrial Waste Management Section completed an inspection of the facility on May 26, 1992. No deficiencies were identified, and no follow up action was required. Mr. Greg East with the City of Portland, Department of Environmental Services, Source Control Group, indicated that the subject property was inspected twice a year, and wastewater

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was analyzed twice a year for biological oxygen demand (BOD), total suspended solids (TSS), oil and grease, and pH. According to Mr. East, there have been no violations against the property since he took over the Lynden Farms account (approximately one year ago). However, a review of facility files indicated that Lynden Farms process water discharges were consistently above the City of Portland BOD limit, and once above the TSS limit in 1991 through 1992. According to Mr. East, BOD and TSS are not regulated parameters, however, a fee is assessed if maximum BOD and TSS limits are exceeded.

4.3.2 Storm Water Discharge

DEQ records indicated that the facility was granted a general NPDES permit for stormwater runoff on August 25, 1992. According to Mr. McCullaugh, a stormwater monitoring program, as prescribed in the permit, was initiated at the facility following receipt of the permit. Mr. McCullaugh indicated that the facility's quality control personnel are responsible for the monitoring. Monitoring results were requested, but have not been received as of this writing.

The general permit also requires that a Storm Water Pollution Control Plan (SWPCP) be completed within 180 days of permit approval. The plan itself does not need to be submitted to the DEQ, and should be kept at the facility. However, a notice of completion of the SWPCP must be submitted to the DEQ. According to facility files, Abiqua Engineering, Inc. (Lynden Farms' Consultant) was granted a 60-day extension to submit Lynden Farms' SWPCP to the DEQ. The subject property (through Abiqua) completed the SWPCP in February of 1993. During McLaren/Hart's site inspection on March 16, 1993, Mr. McCullaugh indicated that the SWPCP was undergoing final review by "upper management." Interviews with the DEQ on April 22, 1993, indicated that they had not received notice that Lynden Farms had completed the SWPCP.

Five storm drains were observed on the property during the site inspection (see Figure 2). A petroleum release extending into one of the storm drains was observed west of the truck maintenance shop (see Section 4.1). There was also a potential for chemicals to be released into two storm drains located approximately 15 feet west of the chemical storage room where chemicals, primarily cleaning solvents, were stored and dispensed. Petroleum releases beneath a parked truck also extended to one of these drains (see Section 4.8 and Figure 2). Storm drains on the property discharged directly into the Willamette River according to the facility files.

In addition, Mr. Kluver indicated that two storm drains on the adjacent Cenex property discharged into underground piping which extended beneath the subject property. Mr. Kluver indicated that approximately one year ago the drains on the

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Cenex property were plugged, and as a result the Cenex parking lot flooded. Mr. Kluver hired a subcontractor to unplug the Cenex drains, and while using a roto-roooter, the piping was found to be damaged (crushed) at two locations on the subject property. The damaged piping was replaced. A potential exists for petroleum releases from the adjacent parking lot (carried in stormwater) to have impacted subsurface soils at the subject property near the former damaged pipe locations.

4.4 Hazardous Materials Storage (Above Ground) (Items 15, 8, 6, 13)

The 1992 assessment indicated that "hazardous materials and hydraulic and lubricating oils appear to be stored in a proper manner, and no evidence of significant spillage of these materials was observed." However, following completion of the assessment, soil sampling was conducted near the "barrel storage area" located along the southern property boundary (see Section 4.4.1); at the "pipe trench in boiler room," adjacent to stored petroleum products (see Section 4.4.2); and adjacent to the "cleaning liquid storage area" (i.e., chemical storage room) (see Section 4.4.3).

During McLaren/Hart's inspection, an additional potential environmental concern was identified at an hazardous materials storage area located near the truck maintenance shop (see Section 4.4.4). This hazardous materials storage had not been identified in the 1992 assessment. Potential chemical releases associated with stored hazardous materials were also noted inside the engine room, the maintenance shop and the truck maintenance shop (see Sections 4.9, 4.11 and 4.14, respectively).

4.4.1 Barrel Storage Area (Item 15)

During 1992 investigations, two soil samples were collected from a depth of two to six inches at two locations in the barrel storage area. The samples were analyzed for PCBs, total petroleum hydrocarbons (TPH) and chlorinated solvents. Analytical results indicated that TPH (diesel and oil range hydrocarbons) was detected at concentration of 230 and 2,800 parts per million (ppm) in the two soil samples, respectively, and that PCBs were detected in one sample at 0.3 ppm. The report further indicated that "no standards currently exist for non-tank related releases of petroleum hydrocarbons"; and that no chlorinated hydrocarbons were identified above detection limits (which ranged from 0.2 to 1.2 ppm, depending on the analyte). The report indicated that "the observed contamination is primarily the result of spillage of waste oil stored in the area."

According to interviews with Mr. Kluver, empty and full barrels were stored along the southern property boundary during and prior to 1992. He did not know the exact amount and how long the barrels had been stored there. He indicated that the

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quantity changed over time. Mr. Kluver also stated that the barrels containing product were sampled to determine the contents following the 1992 soils investigation so that the barrels could be appropriately disposed of.

The area identified as the barrel storage area in 1992 was occupied by wooden pallets, empty bird cages and parked vehicles during McLaren/Hart's inspection. No barrels or drums were observed. Soil surface conditions in this area were obscured by the stored materials and vehicles.

4.4.2 Pipe Trench in Boiler Room (Item 8)

One sediment sample was collected from the pipe trench in the boiler room during 1992 investigations. The sample was collected from a depth of two-to-six inches, and was analyzed for PCBs, TPH, and chlorinated solvents. Laboratory results indicated no detectable PCBs, 120,000 ppm TPH (diesel and oil range hydrocarbons), and no detectable chlorinated solvents. The 1992 report stated, "The extremely high level of heavy oil in the sediment from the pipe trench in the boiler room is very likely to be the result of spillage of lubricating and/or hydraulic oil which are stored nearby." The 1992 report concluded that "the sediment is not considered to be "soil," and therefore does not appear to be governed by state or federal cleanup regulations."

Petroleum releases covering approximately 20 square feet of concrete, and approximately eight square feet of soil in the trench were observed during McLaren/Hart's inspection. In addition, there is a potential that diesel may have leaked from the underground piping which extended from the boiler to the west wall of the boiler room. The piping was located within the trench, which, according to Mr. Kluver, was concrete-lined. Mr. Kluver indicated that this piping originally extended outside the building to an underground diesel tank. The underground tank and the piping to the building were removed in 1991. The piping inside the building was left in place. The integrity of the piping was unknown. (Note: Tank closure documents for the 6,000-gallon diesel tank were on file with the DEQ, and results of soil sampling indicated clean conditions in the tank excavation.)

4.4.3 Chemical Storage Room (Item 6)

During the 1992 investigations, two soil samples were collected from beneath the asphalt at two locations north of the chemical storage room. The samples were analyzed for pH. The results indicated pH values of 9.07 and 9.35. According to the report, "A typical range for soil pH in Multnomah County is 5.5-6.5, with a value of 7.0 being neutral, and the range of alkalinity being from 7.0 to 14.0."

4.4.4 Hazardous Materials Storage near Truck Maintenance Shop (Item 13)

One 55-gallon drum of hydraulic oil, two 55-gallon drums of motor oil and one 55-gallon drum of antifreeze were stored directly on soil adjacent to the truck maintenance shop during McLaren/Hart's inspection of the property. Petroleum staining covering approximately six square feet of soil was observed near the drums. Due to the wet conditions, it could not be determined whether or not the staining was a result of spill/leaks from the drums (although no staining was observed on the base of the drums), from waste oil spilled during pumping of the underground waste oil tank, or other activities associated with the truck maintenance shop.

4.5 Dredged Fill Materials (Item 18)

The 1992 report indicated the upper 15 to 20 feet of the subsurface at the property consisted of dredged sand excavated from the Swan Island basin. According to the report, there was no evidence that the materials used were contaminated. The actual depth and composition of subsurface materials is not known.

4.6 Potential Asbestos Containing Building Materials (Item 4)

Potential asbestos-containing building materials (vinyl floor tile, lay-in ceiling tiles, glued-on wall tiles, gypsum wallboard) were identified during the 1992 assessment and during McLaren/Hart's inspection of the property. There was no indication that these materials had been removed or modified, or that an asbestos survey had been conducted at the facility since the 1992 report was completed.

4.7 Former 8,000-gallon Underground Gasoline Tank (Item 3)

During the site inspection, an approximately seven by eight-foot asphalt patch was observed in the parking lot north of the main building. According to Mr. Kluver, an 8,000-gallon underground tank containing gasoline was removed from this location in 1990. Mr. Kluver indicated that the tank was likely installed in the 1960's; that the tank had not been tightness tested or retrofit with any type of monitoring system; and that an electric gasoline pump for the tank was located adjacent to the tank (i.e., the gasoline was not piped to another location). According to Mr. Kluver, electricity was supplied to the pump from the Cenex mill property prior to about 1982, when the properties were one business owned by Western Farmers. After Western Farmers sold the property, Lynden Farms installed an electric line from their main building to the gasoline pump. Underground tank removal and closure documents for the tank were not provided by Lynden Farms.

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According to records reviewed at the DEQ, Underground Storage Tank Compliance Section, a permit application was completed on August 31, 1988 for the 8,000-gallon gasoline tank (see Appendix G). The document indicated that the 8,000-gallon tank was installed in 1966, and that the tank was permitted (LD. # 1-G-I66). No tank removal or closure documents were located in the file. However, a letter from Lynden Farms to the DEQ dated April 18, 1992 stated, "In September 1990 we employed Thompson's Environmental Services to remove the tank ID 1-G-I66 from our facility. It appears they did not prenotify or file permanent removal documentation with DEQ. They have ceased operations, so I would like to notify you of this tank removal retroactively."

Since no tank closure records or tank excavation sampling results were located, the occurrence or absence of petroleum product in subsurface materials at the location of the 8,000-gallon tank is unknown. In addition, the DEQ tank closure requirements have not been met for the former 8,000-gallon underground tank.

4.8 Petroleum Releases Adjacent to Storm Drain at Truck Parking Area (Item 5)

Petroleum releases covering approximately 12 square feet of soil were observed beneath a parked truck adjacent to a storm drain located west of the main building. Review of facility files indicated that the storm drain discharged directly into the Willamette River. According to Mr. McCullaugh, a truck will park at this location after filling up with fuel (off-site), and a truck is parked at this location approximately 50% of the time. (Note: a petroleum release was mentioned at this location in the 1992 report, but the release was not identified as a potential environmental concern.)

4.9 Petroleum Releases in the Engine Room (Located East of the Boiler Room) (Item 9)

Petroleum releases covering approximately 100 square feet of concrete and approximately 20 square feet of soil within an approximately three-foot wide channel were observed inside the engine room located east of the boiler room. The visible areas of the concrete were generally in good condition with few cracks. According to Mr. Kluver, the channel was lined with concrete. Mr. Kluver indicated that petroleum product was stored in the northeast portion of the building from 1964 to about 1980.

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4.10 Oil/Water Separator Adjacent to the Engine Room (Item 10)

Petroleum releases covering approximately six square feet were observed on the concrete and asphalt beneath and adjacent to the oil/water separator. Mr. Kluver indicated that the oil/water separator had been in operation at least ten years.

4.11 Petroleum Releases and Floor Drains in the Maintenance Shop (Item 11)

Petroleum releases covering approximately 75 square feet were observed in the concrete floor. One floor drain was observed beneath a wash basin. Mr. Kluver indicated that a second floor drain existed beneath stacked boxes in one of the offices inside the shop. The concrete floor adjacent to the visible drain was damp, with no apparent chemical staining.

According to Mr. Kluver, the maintenance shop was constructed at the location of a former ice house and former engine room, and one drain was located in each area. The drain under the wash basin was located in the former engine room. Mr. Kluver stated that both drains discharged to the sanitary sewer system. The integrity of the piping, and materials previously discharged into the drains is unknown.

4.12 Waste Oil Sump, Underground Piping and Petroleum Releases in the Truck Maintenance Shop (Item 14)

A two-foot by three-foot by two-foot deep sump filled with waste oil and covered with a metal grate was observed at the bottom of a grease pit located inside the truck maintenance shop. Mr. Kluver indicated that the sump was concrete lined, and had not been cleaned out since the truck shop was installed in approximately 1982.

Waste oil from the oil/water separator and from vehicles parked over the grease pit was drained into a metal pan. The oil in the pan was then released into an underground pipe which extended approximately 30 feet into an underground waste oil tank (see Section 4.1). The integrity of the underground piping is unknown. Approximately 100 square feet of the concrete floor was stained. The concrete was in good condition.

4.13 Petroleum Release Northwest of the Engine Room (Located Adjacent to the Offal Building (Item 16)

A petroleum release covering approximately six square feet of soil was observed northwest of the engine room located adjacent to offal building. The source of the release was not identified.

4.14 Underground Diesel Tanks Formerly Located on the Cenex Property (Item 1)

A concrete pad was observed south of the chain-link fencing which separated the Lynden Farms property and Cenex property to the north. According to Mr. McCullaugh, the fence (installed by Cenex to prevent Lynden Farms employees from parking on the Cenex property) did not follow the property boundary, but extended approximately ten feet onto Cenex' property. Mr. McCullaugh explained that the concrete pad (the former location of an underground tank) *appeared* to be on the Lynden Farms property, but was actually on Cenex' property. Mr. Kluver indicated that a second underground tank was formerly located adjacent to the Cenex feed mill building.

According to records reviewed at the DEQ, two underground tanks containing diesel were removed from the Cenex property by Thompson's Environmental Services in 1990 (see Appendix H). The capacity of the tanks could not be confirmed. A 1987 "Notification of Underground Tanks" indicated that both tanks were 10,000-gallon capacity and were 27 years old. A 1991 "Notice of Underground Storage Tank Permanent Decommissioning" (filed retroactively) indicated that a 6,000-gallon and 7,000-gallon tank, both formerly containing diesel, were removed from the Cenex property. The file also contained a Consumer Complaint Form completed by Land O'Lakes (Cenex) stating that Thompson's Environmental Services had removed the two tanks and filled the holes, but did not obtain the required permits, sample and analyze soil or submit a final closure report for the tanks. An interview with DEQ personnel indicated that there had been similar complaints made by other companies against Thompson's (who also removed the 8,000-gallon tank from the subject property, see Section 4.7). No record of confirmation soil sampling was located in the DEQ file for Cenex. It is not known whether or not the tanks and associated piping leaked product into the subsurface.

5.0 AERIAL PHOTOGRAPH REVIEW

Aerial photographs of the property from the years 1948, 1957, 1971 and 1987 were reviewed to provide a history of land use and to identify past potential source areas of environmental concern. Table 3 in Appendix B presents the results of the aerial photograph review. Aerial photographs are presented in Appendix I. A summary of the aerial review is presented in the following paragraphs.

Review of the 1948 aerial photograph indicated that the property and vicinity were under water. According to Mr. Chris Edwards with the Army Corp of Engineers, the area was under water as the result of the "Vanport Flood," which was caused by heavy rains and early Chinook winds.

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The property was vacant in the 1957 photograph with the exception of a road which extended through the western portion of the property along the shoreline. The property toward the north had been graded. Other adjacent properties were undeveloped.

The main building, the southern portion of the offal building and the (former) ice house were visible in the 1971 photograph. In addition, a building (former ice house and engine room) existed at the current location of the engine room and maintenance shop. The areas surrounding the buildings were partially-paved. Approximately 40 automobiles, 7 trucks, and 6 trailers loaded with hay bales were parked around the main building. A pump island was visible north of the main building at the former location of the 8,000-gallon underground gasoline tank.

Adjacent properties located north, south and east of the subject property were developed in the 1971 photograph. Vehicle tracks between the subject property and the property currently occupied by Cenex were visible. A pump island was visible adjacent to the northern property boundary at the former location of the underground diesel tank.

In the 1987 photograph, the covered truck port and truck maintenance shop that extends south from the main building were visible. The boiler room, engine room and maintenance shop appeared in their present configuration. The offal building was expanded toward the north and east. An additional engine room was visible north of the offal building. The existing ice house/chemical storage building was also visible. The area surrounding the buildings, with the exception of the brushy slope adjacent to the shoreline, was paved.

Features of potential environmental concern identified during review of the historical aerial photographs consisted of the pump islands at the locations of the (former) underground tanks.

6.0 AGENCY RESEARCH

Appropriate agency databases were reviewed to determine if agency records indicated occurrence of chemical contamination at or near the subject property (see Section 6.1). In addition, the Oregon DEQ and the City of Portland were contacted to determine whether chemical releases which may potentially impact the property have been documented since 1992; and to determine storm and waste water permit status. Portland Gas and Electric was contacted to confirm the installation date and PCB content of transformers located on the property (see Section 6.2).

6.1 Agency List Review

McLaren/Hart personnel reviewed the Agency Information Consultants (AIC) report of six environmental databases (see Appendix J); the DEQ "Environmental Cleanup Site Information System (ECSIS)" listing, dated February 16, 1993; and the "DEQ Underground Storage Tank (UST) Facilities by Zip Code for the Entire State" list dated February 25, 1993 for information regarding the subject property and neighboring sites. The results of the database review are as follows.

The AIC database review indicated that the subject property was identified only on the registered underground tank list. According to the AIC report, there are no known NPL sites, Superfund sites or RCRA violators within a 0.5-mile radius of the subject property. The database review indicated that there are 5 CERCLIS facilities, 21 leaking underground storage tanks, and approximately 37 hazardous waste generators within a 0.5-mile radius of the subject property. Leaking underground tank sites within a 0.25-mile radius of the subject property with the potential to impact the property consisted of Dallas & Mavis, located at 6220 North Basin Avenue (approximately 0.1 mile northeast of the subject property); and P.I.E. International, located at 5550 North Basin Avenue (approximately 0.25 miles southeast of the subject property).

The subject property was not identified on the ECSIS list. However, the ECSIS list identified two nearby facilities: Island Holdings Inc., located at 5885 North Basin Avenue (approximately 0.25 miles south of the subject property); and, Freightliner, located at 5400 North Basin Avenue (approximately 0.5 miles south of the subject property).

According to the DEQ UST Facilities list, Lynden Farms had two permitted tanks, one active tank, and two decommissioned tanks (file #9110). The list also indicated that the adjacent Cenex property had two permitted and two decommissioned tanks (file #8616). No file was identified under the names Western Farmers (the former property owner) or Land O'Lakes.

Based on information provided by AIC and the ECSIS and DEQ UST lists, no documented soil and/or groundwater contamination associated with the subject property is documented in regulatory agency files.

6.2 Agency Interviews and File Review

Agency interviews and file review for the subject property and vicinity are summarized in Table 4 (see Appendix B). Results of the interviews and file review are summarized in Sections 6.2.1 through 6.2.5.

6.2.1 Dallas and Mavis

Soil contamination was identified at the Dallas & Mavis facility located at 6220 N. Basin Avenue during removal of one 1,000-gallon tank and one 10,000-gallon tank in May of 1990. Contaminated soil was stockpiled and treated on-site. In October of 1992, Dallas and Mavis indicated that they planned to have previously contaminated soils hauled off of the property. There was no indication in the file that the soils were actually removed from the property. There was also no indication in the files that groundwater was impacted.

6.2.2 P.I.E. International

Results of groundwater sampling from five recovery wells and three monitor wells at P.I.E. International were documented in a letter from Applied Technology to the DEQ dated July 29, 1992. TPH concentrations ranged from less than 0.1 ppm (the detection limit) to 0.55 ppm. Installation of additional soil borings and monitor wells was proposed in the letter. The depth to ground water and groundwater flow direction was not discussed in the letter.

According to a letter from Groundwater Technology to the DEQ dated March 4, 1993, analytical results for soil samples collected in February of 1993 indicated TPH (diesel range hydrocarbons) were present at 42 to 450 ppm. Groundwater Technology indicated that DEQ "Level 5" cleanup regulations applied to this property, meaning TPH levels must be below 500 ppm for soil. Based on this determination and the analytical results, Groundwater Technology proposed spreading the soil on the property and either seeding the soil or covering the soil with gravel. There was no indication in the file as to whether the DEQ agreed to this plan. There was no information regarding groundwater contamination or remediation.

6.2.3 Island Holdings and Freightliner

Review of the DEQ site summary report (see Appendix K) for Island Holdings indicated that the Island Holdings site is still under investigation by the DEQ (although no groundwater contamination has been documented). The Freightliner report indicated that the DEQ requires no further action at the Freightliner property.

6.2.4 Wastewater Permit Status

The subject property has a valid general stormwater discharge permit through the DEQ and a valid Industrial Wastewater Discharge Permit through the City of Portland. No permit violations were documented for the property.

6.2.5 Transformers

There are two transformers located on the property. The transformers were purchased by Portland Gas and Electric (PG&E) in 1975 and installed on the property in 1988. Both transformers have been tested for PCBs. Each transformer contains less than six parts per million PCBs, and both are considered to be non-PCB containing (less than 50 ppm PCBs).

7.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations were based on current industry standards for Phase I environmental assessments and address concerns identified during 1992 investigations and assessment update activities.

Subject Property

- The waste oil tank and piping which have been in operation for approximately 12 years are unpermitted, and have not been monitored or integrity-tested. It is recommended that the waste oil tank and piping either be brought into compliance or removed in accordance with state and federal regulations.
- Approximately six square feet of stained soil was observed near the truck maintenance shop. The stained soil was located adjacent to the vent/product removal pipe for the underground waste oil tank and adjacent to three 55-gallon drums of oil and one drum of antifreeze. The drums were stored directly on soil. It is recommended that the stained area be tested. If necessary, affected materials should be properly disposed of.

Although DEQ regulations do not currently prohibit storing drums of new product directly on soil, it is recommended that the drums of product be stored on wooden pallets and/or on a paved surface to reduce the possibility of environmental impacts from potential product spills or leaks.

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- A petroleum stain covering approximately 20 square feet was observed adjacent to a pad-mounted transformer located north of an engine room. The transformer (confirmed as non-PCB containing) was not observed to be leaking, and the source of the stain is unknown. Soil analyses conducted in 1992 showed no detectable PCB concentrations. It is recommended that the stained area be tested for petroleum product (TPH). If necessary, affected materials should be properly disposed of.
- Review of facility files indicated that elevated biological oxygen demand (BOD) and total suspended solids (TSS) values were identified during routine testing in 1991 and 1992. According to the City of Portland, BOD and TSS are not currently regulated parameters for waste water. However, a fee is assessed the facility depending on the level of BOD and TSS concentration above acceptable BOD and TSS limits. It is recommended that the facility evaluate waste water treatment alternatives which would bring BOD and TSS values to within City of Portland maximum allowable limits.
- Petroleum staining was observed at storm drains which discharge into the Willamette River. It is recommended that the sources of petroleum releases into the storm drains be removed. It is further recommended that the stained areas be tested for analytes consistent with the most likely chemical source. If necessary, the affected materials should then be properly disposed of.
- The two repaired pipe locations in the underground storm drain system are of potential concern because the piping accepted parking lot runoff. Parking lot runoff may have contained automobile fluids. No observations were recorded and no samples were collected at the time the pipeline was repaired. It is recommended that subsurface materials adjacent to the two repaired pipe locations be tested for petroleum products, and, if necessary, properly disposed of.
- Petroleum hydrocarbons (2,800 ppm diesel and oil) and PCBs (0.3 ppm) were identified in an area along the southern property boundary. The area was formerly used for barrel storage. Disposal requirements for the impacted soils should be specifically evaluated following DEQ guidelines and appropriate actions taken (if necessary).
- The concrete-lined trench in the boiler room extended through the west wall of the boiler room and contained inactive piping and soils impacted by petroleum hydrocarbons (120,000 ppm diesel and oil). The integrity

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of the trench should be confirmed and disposal requirements for impacted soils be specifically evaluated following DEQ guidelines. Appropriate actions should be taken if necessary.

- Soil sampling and analyses conducted in 1992 identified elevated pH levels adjacent to the chemical storage room indicating chemicals stored in and dispensed from this area had potentially been released. Any runoff from the chemical storage area would likely enter two nearby storm drains which discharge directly into the Willamette River. It is therefore recommended that chemical management practices be modified to control inadvertent releases of chemicals stored in this area.
- Fill material used during development of the subject property is of potential environmental concern because of the lack of documentation regarding the origin of the fill material. No action is recommended at this time because there are no documented concerns associated with the fill material. However, soil sampling would be recommended if evidence of possible contamination is observed in the fill materials during facility remodeling/demolition.
- Due to the age and construction of the buildings on the property, it is concluded that asbestos-containing building materials (ACBMs) may be present. All observed materials appeared to be in good condition. An asbestos survey is recommended prior to remodeling and/or demolition activities of identified areas to determine the quantity of ACBMs on the property. If identified, any repair or removal of ACBMs should be performed by properly trained personnel in accordance with state and federal laws and regulations.
- An 8,000-gallon underground tank containing gasoline was removed from the property in 1990. The tank was reportedly operational for approximately 25 years, and had not been monitored for leaks. No tank closure records, including soil sampling to confirm clean conditions, were available in facility or DEQ files. Interviews with the DEQ and review of DEQ files for an adjacent property (Cenex) indicated that the subcontractor hired to remove the 8,000-gallon tank may not have followed DEQ requirements for permitting and may not have collected soil samples. It is therefore unknown whether or not the tank and/or associated piping released petroleum hydrocarbons into the subsurface. It is recommended that soil sampling and analyses be conducted at the location of the underground tank and that appropriate documentation be submitted to the DEQ.

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- A petroleum stain covering approximately 12 square feet was observed beneath a parked truck located west of the main building. It is recommended that the stained area be tested for petroleum product and, if necessary, properly disposed of.
- Petroleum staining was observed in a concrete-lined trench in the engine room. An area adjacent to the staining (in the northeastern portion of the building) was reportedly used for chemical storage from about 1964 to 1980. It is recommended that the integrity of the trench be confirmed and that the stained materials be tested, and if necessary, properly disposed of.
- Petroleum staining covering approximately six square feet was observed across joints on concrete and asphalt surfaces beneath and adjacent to an oil/water separator. The oil/water separator has been in operations for at least 10 years. It is recommended that the material beneath the joints in the stained area be tested, and, if necessary, impacted materials be properly disposed of.
- The two floor drains in the maintenance shop are potential conduits for release of possible chemical spills into the drainage system and/or underlying materials. One drain was not visible during the facility inspection. The second drain was formerly active when the maintenance shop was an engine room and currently receives fluids from a wash basin. Staining, which would suggest chemical spills have occurred, was not discerned on the wet surfaces adjacent to the second drain during the facility inspection. It is recommended that the potential for chemical releases into the basin or directly into the floor drains be managed by specific operations policies; by modification (e.g., enclosure) of the drains; or, by taking the drains out of service and plugging the system appropriately.
- Sampling and analyses of soils underlying stained areas of the concrete floor of the boiler room, engine room, maintenance shop and truck maintenance shop should be considered if/when the building foundations are modified or removed. This recommendation is based on the observations of floor joints and petroleum staining observed on the floor, which suggests that there is a potential for product to have penetrated the concrete and impacted subsurface materials.

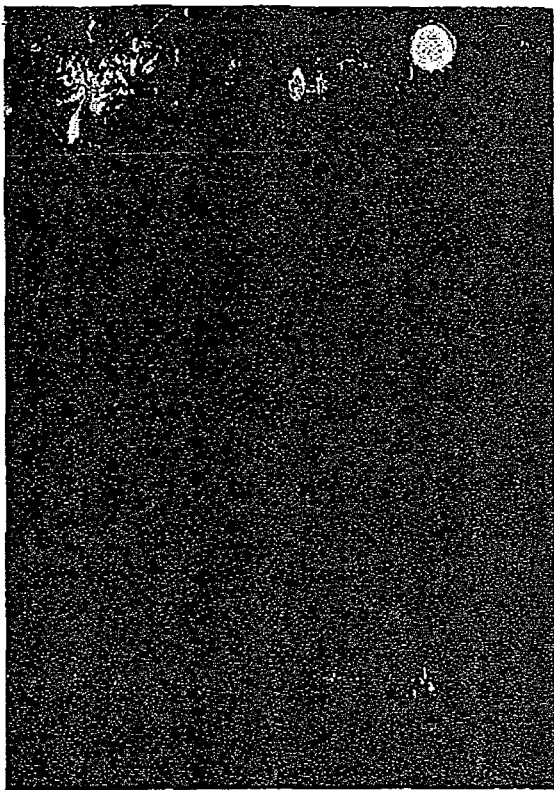
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- The integrity of the waste oil sump located in the truck maintenance shop is unknown. It is recommended that the sump be inspected and, if necessary, adjacent soils sampled to determine if petroleum product has been released.
- A petroleum stain covering approximately six square feet of soil was observed adjacent to the engine room used to operate the chiller. It is recommended that the stained area be tested for petroleum product and, if necessary, properly disposed of.

While comprehensive review of regulatory compliance was beyond the scope of this assessment, it was noted that the DEQ has not been informed that Lynden Farms had completed the Storm Water Pollution Control Plan (SWPCP). DEQ notification is required under their general storm water discharge permit. It is recommended that Lynden Farms send a letter to the DEQ to inform them of the completion of the SWPCP.

Neighboring Properties

- Two underground tanks containing diesel (with reported capacities of either 6,000, 7,000 or 10,000 gallons) were removed from the adjacent Cenex property. One tank was located adjacent to the boundary with the subject property. (The area formerly occupied by this tank was within fencing which surrounded the subject property, and thus appeared to be part of the subject property.) No tank closure records, including soil sampling to confirm clean conditions, were available in facility or DEQ files for either tank. Interviews with the DEQ and review of DEQ files indicated that the contractor hired to remove the tanks did not follow DEQ requirements for permitting and may not have collected soil samples. It is therefore unknown whether or not the tanks and/or associated piping released petroleum hydrocarbons into the subsurface which may have impacted the subject property.
- Three facilities with confirmed soil and/or groundwater contamination, were located within a 0.25-mile radius of the property: Dallas & Mavis, P.I.E. International and Island Holdings. There is no indication in the files that contamination from these properties has moved off-site. It is recommended that the status of remediation at these facilities be monitored.



2

REA

SOIL TESTING SERVICES

for the property at

6135 N. Basin Ave.

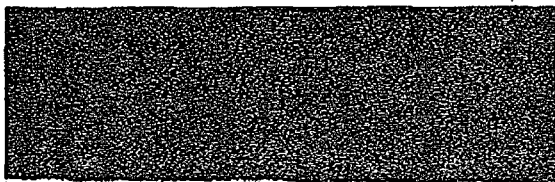
Portland, Oregon

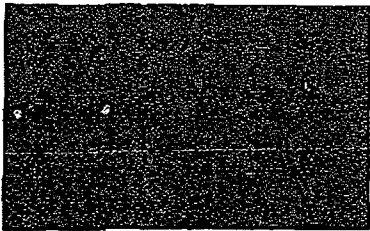
Submitted to

Donald Easley

October 10, 1994

200 Hawthorne Avenue S.E., Suite C-320
Salem, Oregon 97301 • (503) 370-7230





REA

Tech Management, Inc.

October 10, 1994

Donald Easley
Fircrest Farms
6135 N. Basin Ave.
Swan Island
Portland, Oregon 97217
Phone: (503) 285-8313
Fax: (503) 285-6399

Dear Mr Easley:

RE: SOIL TESTING SERVICES (940924)

The following is the Soil Testing Services report for the property located at 6135 N. Basin Avenue, Swan Island, in Portland, Oregon. This Report is written following guidelines described in OAR 340-122-230.

Don, we appreciate the opportunity to work with you on this important project, and look forward to working with you again in the future. If you have any questions, please call.

Sincerely,
REA Tech Management, Inc.

Rory D. Greenfield
Field Services Project Manager

Charles D. (Chuck) Getter, Ph.D.
Senior Technical Advisor
Soil Matrix Cleanup Supervisor
(DEQ lic.#126509)

I. TECHNICAL INFORMATION

A. BACKGROUND

On September 24, 1994, REA Tech Management, Inc., (REA), was contracted to perform Soil Testing Services on the property located at 6135 N. Basin Avenue, Swan Island, in Portland, Oregon.

The following scope of work was completed:

1. REA collected twenty (20) soil samples from four (4) separate locations on the subject property. Figure 1 is a site map showing the locations of each area sampled. Eight (8) samples were collected from area 1 which is located to the west of the offices and cold storage area. Four (4) samples were collected from each of the additional areas 2, 3 and 4. Area 2 is located southwest of the vehicle maintenance shop, area 3 is located east of the water reservoir and area 4 is located east of the covered truck port, against the fenceline running northeast-southwest, between truck stalls 86 and 89. The location of these sampling areas are presented in the Figure 1 Site Map. Samples were taken from locations within these areas where soil staining seemed the most obvious. Samples were taken by hand from depths between three (3) inches and six (6) inches.
2. REA took soil samples at each of the four locations using head space methodology. Samples were taken approximately one (1) foot apart from each other in a north south line. The two samples at each end of the sampling grid from each area were analyzed for petroleum hydrocarbons.

B. SAMPLING PLAN—Drilling and Sampling Parameters

Four locations were identified on the subject property to be sampled by REA. Sampling locations within these areas were chosen in the effort of maximizing the chances of detecting contamination. The location of the sampling areas are presented in Figure 1, Site Map.

1. Soil Sampling

On September 24, 1994, samples were taken from four separate locations on the subject property. A backhoe cleared away three to six inches of surface soil and sampling was done by hand. All tools, monitoring equipment, and sampling equipment were cleaned prior to setting up at each sampling location. A total of eight (8) samples were taken from area 1 while areas 2, 3 and 4 each had four (4) samples taken from them. Two samples from each area were then analyzed. The location of these sampling areas are presented in the Figure 1 Site Map.

2. Sampling Methods

The soil samples were obtained by hand. Each sample was placed directly into a laboratory cleaned, 4 ounce, clear glass wide mouth jar fitted with a Teflon lined screw cap lid. The jar was filled to maximum capacity to minimize volatile losses. A clean pair of disposable surgical type gloves were used at each new area. The samples were transported promptly to REA Environmental Science and Testing, Inc's analytical laboratory, together with sampling information and Chain-of-Custody documentation. The sample was placed on ice and then stored at 4 degrees Celsius in a cooler and then a refrigerator until analyzed. The sample was given a unique number and a description of the sample collection location was included in the Chain-of-Custody form that accompanied the sample to the lab. Enclosure I contains copies of the Chain-of-Custody Form and Sample Analyses.

3. Results

The following table illustrates the analytical results of the tested samples (A#-# represents area number-sample number):

Sample #	Analytical Method	Analytical Result (ppm)
A1-5	TPH-D	ND
	TPH-418.1	66.6
A1-8	TPH-D	ND
	TPH-418.1	33.8
A2-3	TPH-D	ND
	TPH-418.1	357
A2-4	TPH-D	ND
	TPH-418.1	293
A3-1	TPH-D	ND
	TPH-418.1	186
A3-4	TPH-D	ND
	TPH-418.1	90.8
A4-1	TPH-D	ND
	TPH-418.1	293
A4-4	TPH-D	ND
	TPH-418.1	50.8

ND means not detected at or above the lab reporting limit.
All results are reported in parts per million (ppm).

II. CONCLUSIONS

According to DEQ cleanup standards outlined in OAR340-108-030, spills and releases of oil or hazardous material shall be cleaned up by employing the best available methods of cleanup to achieve the lowest practicable level of contamination. The DEQ was contacted to determine what this level should be for the subject property. According to Gil Wistar of the Department of Environmental Quality Site Assessments Division, the lowest practicable level of contamination that may exist for this site is 100 ppm if only heavy oils exist in the soil. All areas with levels above 100 ppm require further cleanup. According to REA's analysis, this includes areas 2, 3 and 4. Further analysis is needed to determine if any other hazardous materials exist in the soil. If any are determined to exist, cleanup levels are subject to change based on the nature of these materials. Further analysis must be done prior to disposing of contaminated soil so that it may be disposed of properly. Enclosure 2 is a copy of the cleanup standards described in OAR340-108-030.

III. LIMITATIONS

Subject to the Terms and Conditions signed in connection with the preparation of this report, all opinions which we give verbally and in written form are based on the information collected during our survey, our present understanding of the site conditions and our professional judgment in light of such information at the time of preparation of this opinion. We are not responsible for the accuracy of information at the time of preparation of this opinion. We are not responsible for the accuracy of information provided by individuals or entities which are used by us or others in connection with the preparation of this opinion. This report is an opinion work, and no warranty is either expressed, implied, or made as to the conclusions, advice, and recommendations offered in this report. Neither this opinion nor any extract herefrom or reference to hereto shall be furnished to, or quoted to any other person, firm or corporation without our express written permission.

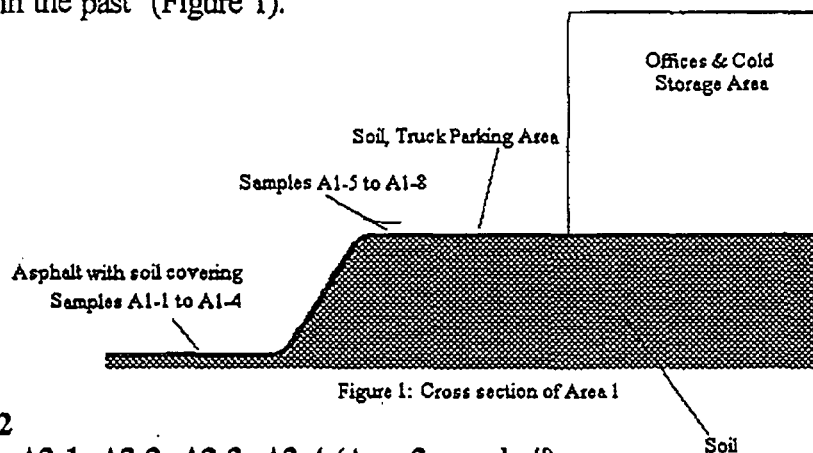
FIGURE 1:
SITE MAP

Sampling Locations 940924 (Please see accompanying map for specific locations.):

AREA 1

Samples A1-1, A1-2, A1-3, A1-4, A1-5, A1-6, A1-6, A1-7, A1-8 (Area 1-sample #):

This set of samples was taken from the truck parking area on the west side of the offices and cold storage building. Four samples (A1-1 - A1-4) were taken from the surface soil that was directly over asphalt, approximately 10 feet behind the metal grate over the #1 catch basin. Samples A1-5 - A1-8 were taken directly upslope from this location where trucks have been parked in the past (Figure 1).



AREA 2

Samples A2-1, A2-2, A2-3, A2-4 (Area 2-sample #):

This set of samples was taken from outside of the vehicle maintenance shop. A backhoe was able to excavate approximately 6 inches of soil where four samples were then obtained from.

AREA 3

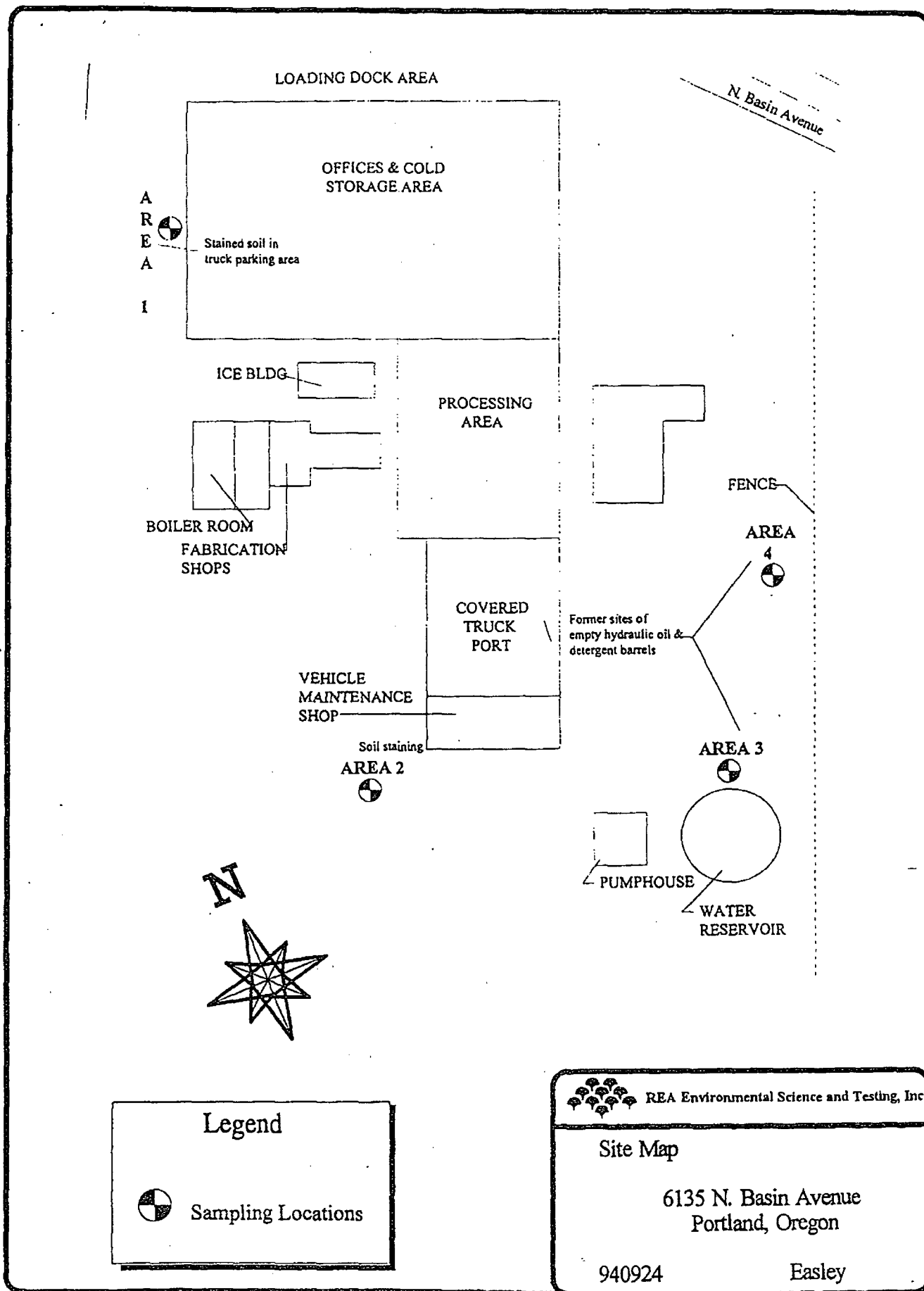
Samples A3-1, A3-2, A3-3, A3-4 (Area 3-sample #):

This set of samples was taken from outside of the water reservoir. A backhoe was first able to scrape off approximately 3 to 6 inches of surface soil in this area and then four samples were taken.

AREA 4

Samples A4-1, A4-2, A4-3, A4-4 (Area 4-sample #):

This set of samples was taken from the southeast side of the covered truck port, between stall #'s 86-89 posted on the fence enclosing the property. A backhoe was first able to scrape off 3 to 6 inches of surface soil and then samples were taken.



REA Environmental Science and Testing, Inc.

Site Map

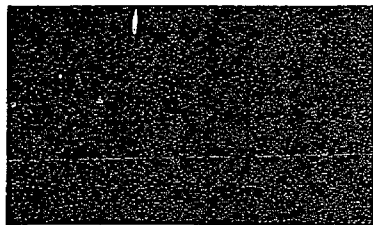
6135 N. Basin Avenue
Portland, Oregon

940924

Easley

ENCLOSURE I:

SAMPLING INFORMATION & CHAIN-OF-CUSTODY



REa

Environmental Science
and Testing, Inc.

Report of Sample Analysis By
DEQ Method TPH-D, Diesel Quantification
Using Gas Chromatography (GC/FID)
Results Reported in Parts Per Million (mg/Kg)

Project: Easley/940924

Location: 6135 N. Basin, Swan Island, in Portland,
OR

Attention: Rory Greenfield

Analyzed By: Steve Castellano

Date Samples Received: September 26, 1994

Date of Report: September 30, 1994

Report Number: 09301325.094

Page 1

Sample Number	Concentration (mg/Kg)
3105-5 (A1-5)	ND
3105-8 (A1-8)	ND
3105-11 (A2-3)	ND
3105-12 (A2-4)	ND
3105-13 (A3-1)	ND
3105-16 (A3-4)	ND
3105-17 (A4-1)	ND
3105-20 (A4-4)	ND

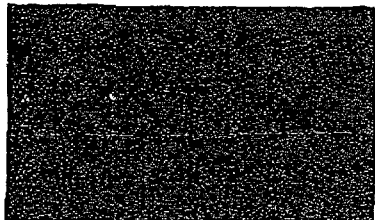
Quality Assurance	Method Blank	Lab Reporting Limit
	ND	5

ND means not detected at or above the lab reporting limit.

Approved By:
Environmental Science and Testing, Inc.


Steve Castellano
Lab Manager

200 Hawthorne Avenue S.E., Suite C-320, Salem, Oregon 97301 • Phone (503) 370-7230 • FAX (503) 370-7151



REA

Environmental Science
and Testing, Inc.

Report of Sample Analysis By
DEQ Method TPH-418.1 modified, Heavy Hydrocarbon Quantification
Using Infra Red Spectrophotometry
Results Reported in Parts Per Million (mg/Kg)

Project: Easley/940924
Location: 6135 N. Basin, Swan Island, in Portland,
OR
Attention: Rory Greenfield
Analyzed By: Steve Castellano

Date Samples Received: September 26, 1994
Date of Report: September 30, 1994
Report Number: 09301325.094

Page 2

Sample Number	Concentration (mg/Kg)
3105-5 (A1-5)	66.6
3105-8 (A1-8)	33.8
3105-11 (A2-3)	357
3105-12 (A2-4)	293
3105-13 (A3-1)	186
3105-16 (A3-4)	90.8
3105-17 (A4-1)	293
3105-20 (A4-4)	50.8

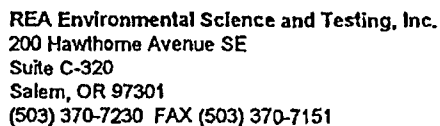
Quality Assurance	Method Blank	Lab Reporting Limit
	ND	5

ND means not detected at or above the lab reporting limit.

Approved By:
Environmental Science and Testing, Inc.

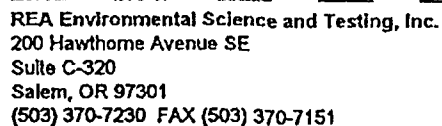

Steve Castellano
Lab Manager

200 Hawthorne Avenue S.E., Suite C-320, Salem, Oregon 97301 • Phone (503) 370-7230 • FAX (503) 370-7151



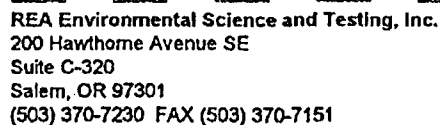
Page 1 of 3

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Page 2 of 3

Relinquished By		Received By		Field Notes:	
Signature		Signature			
Print Name		Print Name			
Company		Company			
Date	Time	Date	Time		



Page 3 of 3

Relinquished By		Received By		Sample Turn Around		Invoice Information		Sample Tracking		Laboratory Tracking	
Signature <i>Rory Greenfield</i>		Signature <i>Steve Castellano</i>		<input type="checkbox"/> Same Day (Rush Charges Apply)		P.O. # <i>600146-P</i>		Smp EXP Date:		Lab # <i>3105</i>	
Print Name <i>RORY GREENFIELD</i>		Print Name <i>STEVE CASTELLANO</i>		<input type="checkbox"/> 24 Hours (Rush Charges Apply)		Bill To:		Extract Date		Report # <i>09301325.094</i>	
Company <i>REA Tech Mount</i>		Company <i>REA-EST</i>		<input checked="" type="checkbox"/> Normal (5 days)				Ext EXP Date		Other	
Date <i>9/26/94</i> Time <i>8:08am</i>		Date <i>9/26/94</i> Time <i>8:08am</i>						Acquisition Date			
								QVOC:			
Relinquished By		Received By		Field Notes:							
Signature		Signature									
Print Name		Print Name									
Company		Company									
Date Time		Date Time									

ENCLOSURE 2:

OREGON ADMINISTRATIVE RULES: 340-108-030

OREGON ADMINISTRATIVE RULES

CHAPTER 340, DIVISION 108 - DEPARTMENT OF ENVIRONMENTAL QUALITY

[ED. NOTE: The Appendix I and publications referenced in these rules are not printed in the Oregon Administrative Rules Compilation. Copies may be obtained through the Hazardous and Solid Waste Division of the Department of Environmental Quality.]

Stat. Auth.: ORS Ch. 183, 459, 466 & 468

Hist.: DEQ 7-1984, f. & cf. 4-26-84; DEQ 8-1985, f. & cf. 7-25-85; DEQ 17-1986, f. & cf. 9-18-86; DEQ 15-1987, f. & cf. 7-28-87

340-108-021 [Renumbered to 340-108-040]

Cleanup Standards

340-108-030 (1) Any person liable for a spill or release or threatened spill or release shall immediately cleanup the spill or release or threatened spill or release consistent with sections (2) and (3) of this rule. Cleanup of a threatened spill or release shall be by taking immediate repair, corrective or containment action.

(2) Spills and releases or threatened spills and releases of oil or hazardous material shall be cleaned up by employing the best available methods of cleanup to achieve the lowest practicable level of contamination. The Department shall determine the lowest practicable level of contamination by applying one or more of the following factors, as appropriate:

- (a) Population at risk;
- (b) Routes of exposure;
- (c) Amount, concentration, hazardous and toxic properties, environmental fate and transport (e.g., ability and opportunities to bioaccumulate, persistence, mobility, etc.), and form of the oil or hazardous material present;
- (d) Hydrogeological factors (e.g., soil permeability, depth to saturated zone, hydrologic gradients, proximity to a drinking water aquifer, floodplains and wetlands proximity);
- (e) Current and potential ground water use;
- (f) Climate (rainfall, etc.);
- (g) The extent to which the oil or hazardous material can be adequately identified and characterized;
- (h) Whether oil or hazardous material at the site may be reused or recycled;
- (i) The likelihood of future releases if the oil or hazardous material remain on-site;
- (j) The extent to which natural or man-made barriers currently contain the oil or hazardous material and the adequacy of the barriers;
- (k) The extent to which the oil or hazardous materials have migrated or are expected to migrate from the area of their original location, or new location if relocated; and whether future migration may pose a threat to public health, safety, welfare or the environment;
- (l) The extent to which State or Federal environmental and public health requirements are applicable or relevant and appropriate to the specific site and the extent to which other State or Federal criteria, advisories, and guidance should be considered in developing the cleanup remedy;
- (m) The extent to which contamination levels exceed applicable or relevant and appropriate State or Federal requirements or other State or Federal criteria, advisories, and guidance;
- (n) Contribution of the oil or hazardous material to an air, land, water, and/or food chain contamination problem;
- (o) The pre-existing background level of the oil or hazardous material present at the cleanup site;
- (p) Other appropriate matters may be considered.

(3) In addition to considering the cleanup factors in section (2) of this rule, cleanup of hazardous waste, or material which as waste is defined as hazardous, shall also be consistent with the following requirements:

(a) If it is a mixture of a solid waste and a hazardous waste that exhibits a characteristic identified in 40 CFR Part 261- Subpart C, or is a hazardous waste that is listed in 40 CFR Part 261- Subpart D solely because it exhibits one or more characteristics identified in Subpart C, the resultant mixture must be cleaned up to the extent that any remaining waste no longer exhibits any characteristics of hazardous waste identified in Subpart C. Any removed characteristic hazardous waste must be shipped to an authorized hazardous waste treatment or disposal facility.

(b) If it is a mixture of solid waste and one or more hazardous waste listed in 40 CFR Part 261- Subpart D, contamination at the site must be cleaned up to background levels and the removed hazardous waste mixture shipped to an authorized hazardous waste treatment or disposal facility. Any hazardous waste remaining at the site is subject to regulation under OAR 340- division 100 to 109 unless it is delisted pursuant to OAR 340-100-020 and 022.

[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the office of the Department of Environmental Quality.]

Stat. Auth.: ORS Ch. 466

Hist.: DEQ 17-1986, f. & cf. 9-18-86

Cleanup Report

340-108-040 The Department may require the person responsible for a spill or other incident to submit a written report within 15 days of the spill or other incident describing all aspects of the spill and steps taken to prevent a recurrence.

[Comment: Transporters are also required by the Public Utility Commissioner to file a Hazardous Materials Incident Report (DOT Form F3800.0) within 15 days after a spill. A copy of this report may be sent to the Department in lieu of the report required by this rule.]

Stat. Auth.: ORS Ch. 183, 459 & 468

Hist.: DEQ 7-1984, f. & cf. 4-26-84; DEQ 8-1985, f. & cf. 7-25-85; DEQ 17-1986, f. & cf. 9-18-86; Renumbered from 340-108-021

Sampling/Testing Procedures

340-108-050 The representative sampling procedures and analytical testing protocols referenced in 40 CFR 260.21 shall be used when conducting sampling or testing of hazardous materials to comply with this division. For testing of oil spills, the analytical testing protocols for "Oil and Grease (spectro photometric, infra-red)" in Standard Methods (16 ed., #503) and EPA Methods for Chemical Analysis (600/4-79-020, #413.2 or #413.1) shall be used.

[Publications: The publication(s) referred to or incorporated by reference in this rule are available from the office of the Department of Environmental Quality.]

Stat. Auth.: ORS Ch. 466

Hist.: DEQ 17-1986, f. & cf. 9-18-86

References

340-108-060 See 340-100-011 for incorporation by reference of Code of Federal Regulations cited in this division.

Stat. Auth.: ORS Ch. 466

Hist.: DEQ 17-1986, f. & cf. 9-18-86



PRIVILEGED AND CONFIDENTIAL

April 5, 1995

James L. Arnone, Esq.
Latham & Watkins
Attorneys At Law
633 West 5th Street, Suite 4000
Los Angeles, CA 90071-2007

1
TPH only

SUBJECT: Results of Investigation of
Morf Family Trust Property/Foster Farms Facility
6135 North Basin Avenue, Portland, Oregon

Dear Mr. Arnone:

Energy & Environmental Solutions (E&ES) is pleased to submit this letter summarizing the results of the subsurface investigation and Foster Farms' tank tightness tests conducted at the Morf Family Trust Property located at 6135 North Basin Avenue, Portland, Oregon (subject property). (The subject property was formerly referred to as Lynden Farms and is now leased by Foster Farms.) The investigation was conducted in response to concerns expressed by Bank of America during their review of financial transaction documents.

Scope of Field Activities

The scope of work performed by E&ES was based on review of data from previous environmental investigations as described in the following documents:

- ✓ (1) Environmental Property Assessment, May 1992; by PBS Environmental, Inc., for Latham & Watkins;
- ✓ (2) Update to Environmental Site Assessment of Lynden Farms, April 29, 1993, by McLaren/Hart for Latham & Watkins;
- ✓ (3) Analytical Results of Soil and Groundwater Investigation for Preliminary Remediation Estimate, January 14, 1994; by McLaren/Hart for Latham & Watkins; and
- ✓ (4) Soil Testing Services, October 10, 1994; by REA Environmental Science and Testing for Fircrest Farms (Foster Farms).

Done ✓

The originally proposed scope of work consisted of the evaluation of all Potential Source Areas identified by McLaren/Hart except the former Cenex diesel tanks, asbestos-containing building

materials, chemical storage, stormwater discharge and dredge fill materials (McLaren/Hart Potential Source Areas #'s 1, 4, 6, 17 and 18, respectively) (see Figure 1 in Attachment 1 and Table 1 in Attachment 2). The thirteen areas evaluated generally fall into four categories: underground storage tanks, soil staining, concrete or asphalt staining, and other areas.

The original scope of work anticipated the completion of a minimum of nine soil borings at eight Potential Source Areas and the collection and analysis of nine soil samples. Completion of additional borings was contingent upon inspection of surface conditions to evaluate the likelihood for occurrence of chemicals of concern in the subsurface and upon access restrictions imposed by site conditions. Based on the facility inspection, field data, requests from Foster Farms and discussions with you, an additional eight borings were completed and an additional 28 soil samples were collected. Due to site conditions and/or access restrictions, no sampling was completed at the transformer area, the oil/water separator and the waste oil sump.

Sampling Methods

Energy & Environmental Solutions geoscientist Louise M. Hauke completed field activities at the site between March 21 and March 23, 1995. Field activities consisted of the completion of seventeen soil borings and the collection of thirty-seven soil samples (see Figures 2 through 6 in Attachment 1). (Note: Boring numbering begins with number B2 and continues consecutively.)

Geotech Explorations of Tualatin, Oregon, was retained to complete the soil borings using a Geoprobe® where access permitted (Borings B2 through B14). The Geoprobe® is a driven tube-type sampler. Samples were collected by lining the Geoprobe® with a 2-foot long, 1-inch diameter plastic tubing. Upon retrieval of the sample tube, the tube was cut open, and soil from the tube was transferred to a screw-top, 4-ounce glass jar. At selected locations where sufficient sample volume was present in the tube, a sample was collected from each end of the drive tube. The samples were labelled, placed in an insulated container cooled with ice, and transported to the analytical laboratories under chain-of-custody protocols.

Any soil remaining in the sample tube was placed in a resealable plastic bag and allowed to reach equilibrium with the headspace in the plastic bag. A photoionization detector (PID) was subsequently inserted in the bag to determine concentrations of volatile organic vapors in the headspace.

Where access prohibited the use of the Geoprobe® (inside the Boiler Room, Engine Room, Maintenance Shop and near the Chiller Engine Room), concrete coring and pick and trowel methods were used to advance the soil boring. The presence of large (> 12" diameter), hard rocks in the fill material prevented the advancement of these borings to native soil. Therefore, samples were collected of the sandy matrix of the fill material. Upon retrieval of the fill material

samples, the samples were handled as described in the previous paragraphs.

Laboratory Analysis

The soil samples collected from the borings located in the vicinity of the former gasoline tank (Borings B8, B13 and B14) were submitted to NET laboratories of Portland, Oregon, for analysis for the presence of total petroleum hydrocarbons as gasoline by the Oregon Administrative Rule (OAR) total petroleum hydrocarbons (TPH)-gasoline procedure. All other samples were submitted to MBT Environmental Laboratories of Rancho Cordova, California, for analysis of gasoline through motor oil range TPH by EPA Method 8015 modified. Based on Foster Farms' direction, soil samples collected from borings B4, B5 and B6 were only analyzed for TPH as motor oil. All soil samples were analyzed on either a 48-hour or 72-hour rush basis.

Surface and Subsurface Conditions

Approximately 80% of the subject property situated north of the vegetation area is paved with asphalt. The southern and eastern surfaces of the subject property are composed of baserock.

Subsurface lithology consisting of silts, and sands is typical of dredge fill or of alluvial overbank deposits. Subsurface lithology encountered in the soil borings (see Attachment 3) consisted of very dark gray to black silts, sandy silts, silty sands and sands. These units ranged in thickness from less than one inch to greater than two feet. These units were not laterally continuous across the subject property. Groundwater was encountered in Boring B8 at a depth of approximately 16.5 feet below ground surface.

Moderate gasoline odors were observed in the soil samples collected from the borings installed in the former gasoline tank location. The intensity of the gasoline odor decreased with depth and with distance from the former tank location. Moderate heavy-range petroleum hydrocarbon odors were observed in the shallow soil samples collected from borings completed in the vicinity of the damaged storm drains. The intensity of the heavy-range petroleum hydrocarbon odors decreased with depth from four feet to eight feet and were not observed in samples collected from fourteen to sixteen foot depth intervals. Moderate decomposed organic matter odors were observed in the deeper samples.

Concrete thickness in the Maintenance Shop, Boiler Room and Engine Room ranged between nine and twelve inches and asphalt thickness near the Chiller Engine Room was observed to be approximately four inches. Underlying the concrete and asphalt was approximately three inches of sandy gravel with well-rounded clasts to two inches in diameter (gravel sub-base). The gravel sub-base was underlain by a sandy gravel with very hard, angular clasts to greater than 12" in diameter and with approximately 15% silty sand matrix (fill material). The presence of the clasts

prevented advancement of the borings to depths greater than two feet. All facility buildings except the Truck Maintenance Shop and Pump House are situated on fill materials approximately three feet higher than the remainder of the property. Conversations with facility representatives indicated that the fill material was most likely placed to prevent settling of the buildings.

Results of Laboratory Analyses

The results of the laboratory analyses are presented on Table 2, included in Attachment 2. Laboratory data sheets and chain-of custody documents are presented in Attachment 4. Gasoline-range TPH as gasoline were not detected in any of the thirty-one samples for which it was analyzed. Diesel- and motor oil-range TPH results for the four categories of Potential Source Areas are summarized in the following paragraphs.

Underground Storage Tanks (Area 3)

Gasoline-range TPH were not detected in any of the nine soil samples collected from the three borings installed in the former gasoline tank excavation at concentrations above the method detection limit (10 mg/kg).

Soil Staining (Areas 5, 12, 13, 15)

Diesel-range TPH were detected at concentrations between 12 and 100 mg/kg in three of the four soil samples collected from two borings at areas previously identified with soil staining.

Motor oil-range TPH were detected at concentrations between 11 and 28 mg/kg in eight of the ten soil samples collected from two borings at areas previously identified with soil staining.

Concrete or Asphalt Staining (Areas 8, 9, 11, 16)

Diesel-range TPH were detected in one of the four fill material samples collected from beneath areas of identified asphalt staining at a concentration of 68 mg/kg.

Motor oil-range TPH were detected at concentrations of 28 and 120 mg/kg in two of the four fill material samples collected from beneath areas of identified asphalt staining. Due to the presence of large rocks in the fill material, the samples were collected from the sandy matrix which comprised approximately 10 to 15% of the total volume of the material. Therefore, the TPH concentration in the fill material as a whole would be approximately an order of magnitude less than the levels measured in the sandy matrix.

James L. Arnone
April 5, 1995
Page 5 of 5

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Other Areas (Area 2)

Diesel-range TPH were detected at concentrations between 12 and 16 mg/kg in four of the fifteen soil samples collected from five borings at the two storm drain rupture areas.

Motor oil-range TPH were detected at concentrations between 21 and 120 mg/kg in seven of the ten shallow (five to eight foot depth interval) soil samples collected from five borings at the storm drain rupture areas. Motor oil-range TPH were detected at concentrations of 19 and 22 mg/kg in two of the five deep (fifteen to sixteen foot depth interval) soil samples collected from two borings at areas previously identified with soil staining.

Waste Oil Tank Tightness Testing

The waste oil tank was tightness tested on December 17, 1993 and March 22, 1995. The tank tested tight on both occasions. Copies of the tightness tests are included as Attachment 5.

Conclusions and Recommendations

The results of the current and previous investigations at the source areas (summarized in Table 1) were used to evaluate the status of the Potential Source Areas (see Table 3). Based on this evaluation, low levels of chemicals occur in shallow soils but are not present at depths or concentrations likely to threaten ground water. Minor modifications to existing practices and environmentally prudent operation procedures are recommended. Further evaluation of source areas should be considered if facilities are remodelled or removed.

Thank you for giving us the opportunity to complete provide this work for you. If you have any questions please call me or Louise M. Hauke at (916) 756-8978.

Sincerely,



Jill P. Slater, Ph.D.
Senior Staff Geoscientist

Attachments (5)

cc: See attached distribution list.

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Distribution List:

Mr. Roger Morph
1187 Coast Village Road, #1-162
Montecito, California 93108

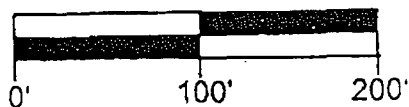
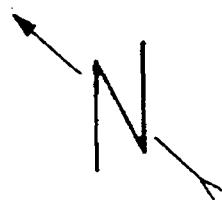
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Ms. Mary C. Fling
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Real Estate Industries Division
Bank of America Oregon
1001 SW Fifth Avenue
Portland, Oregon 97204

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SECTION I

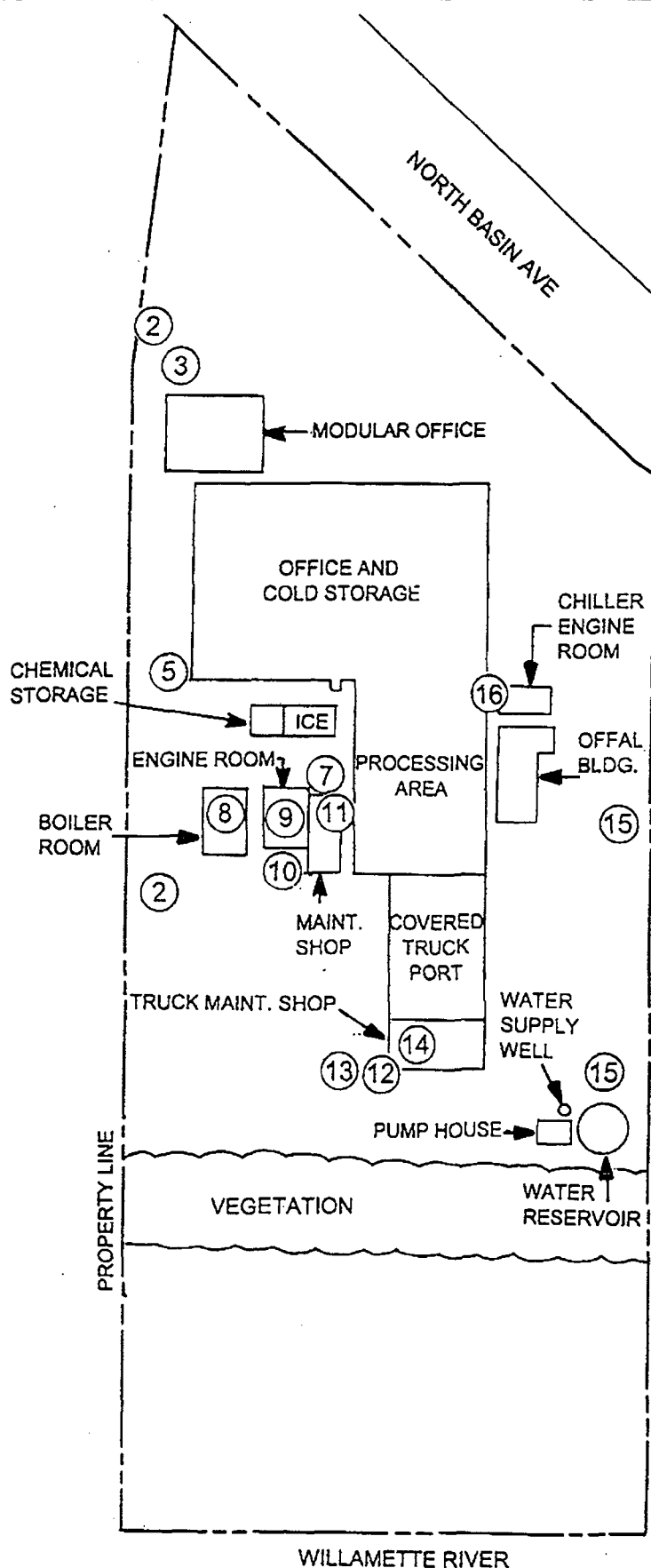
AREA	DESCRIPTION
2	DAMAGED STORM DRAINS (2 LOCATIONS)
3	FORMER 8,000 gal. GASOLINE STORAGE TANK
5	SOIL STAINING NEAR STORM DRAIN INLET (REA AREA 1)
7	TRANSFORMER AREA
8	CONCRETE STAINING IN BOILER ROOM
9	CONCRETE STAINING IN ENGINE ROOM
10	ASPHALT STAINING NEAR OIL/WATER SEPARATOR
11	CONCRETE STAINING IN MAINTENANCE SHOP NEAR FLOOR DRAIN
12	SOIL STAINING NEAR WASTE OIL TANK
13	SOIL STAINING NEAR TRUCK MAINTENANCE SHOP (REA AREA 2)
14	CONCRETE STAINING IN TRUCK MAINT. SHOP AND WASTE OIL SUMP
15	BARREL STORAGE AREA (REA AREAS 3 AND 4)
16	ASPHALT STAINING NEAR CHILLER ENGINE ROOM



SCALE: 1" = 100'

SOURCE:

"TENTATIVE MINOR PARTITION PLAN" BY SETON,
JOHNSON & ODELL, INC., JULY 11, 1980.



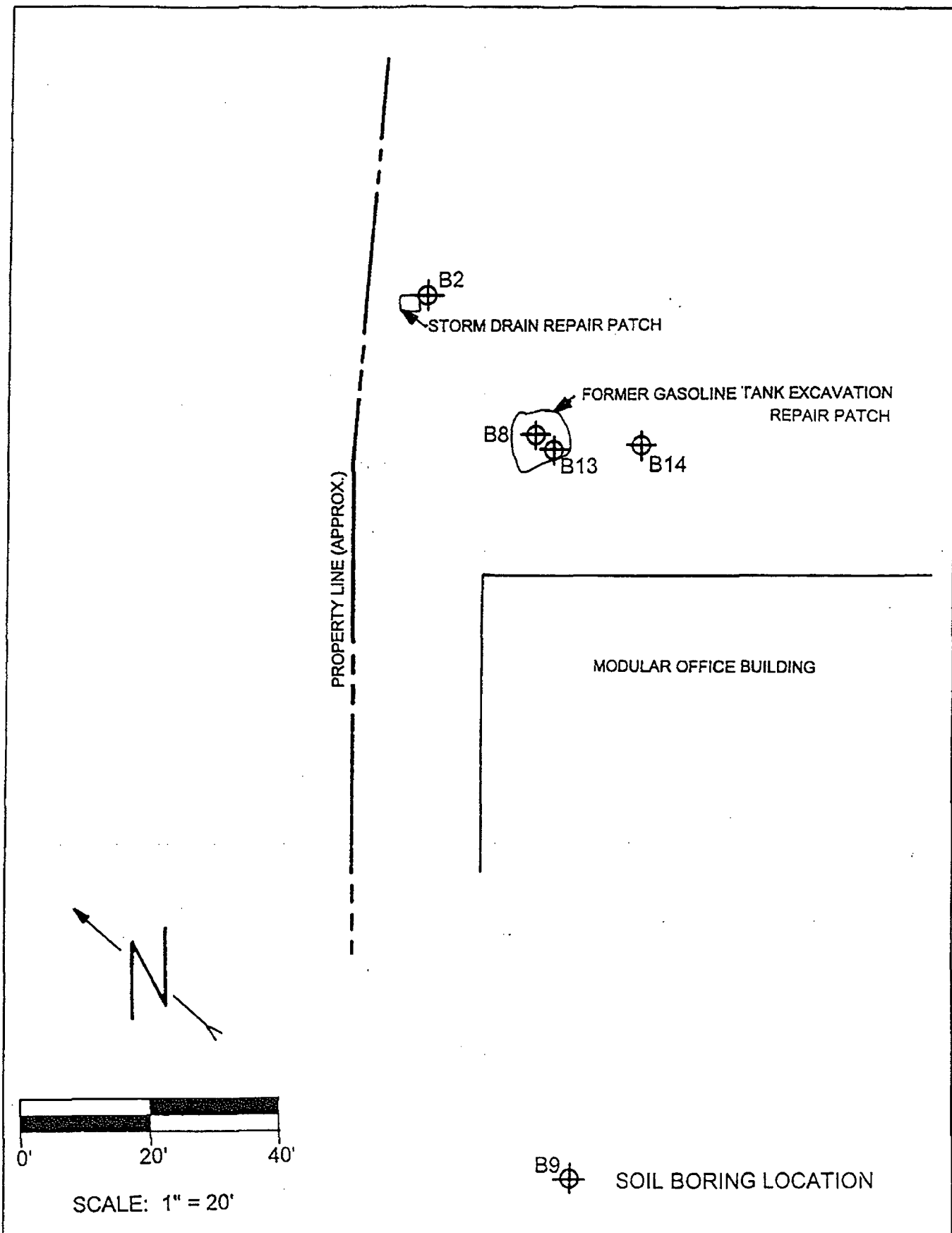
SITE MAP
SHOWING POTENTIAL SOURCE AREAS

1
FIGURE

FOSTER FARMS, 6135 NORTH BASIN AVENUE, PORTLAND, OREGON

LMH 03-24-95

FF 095

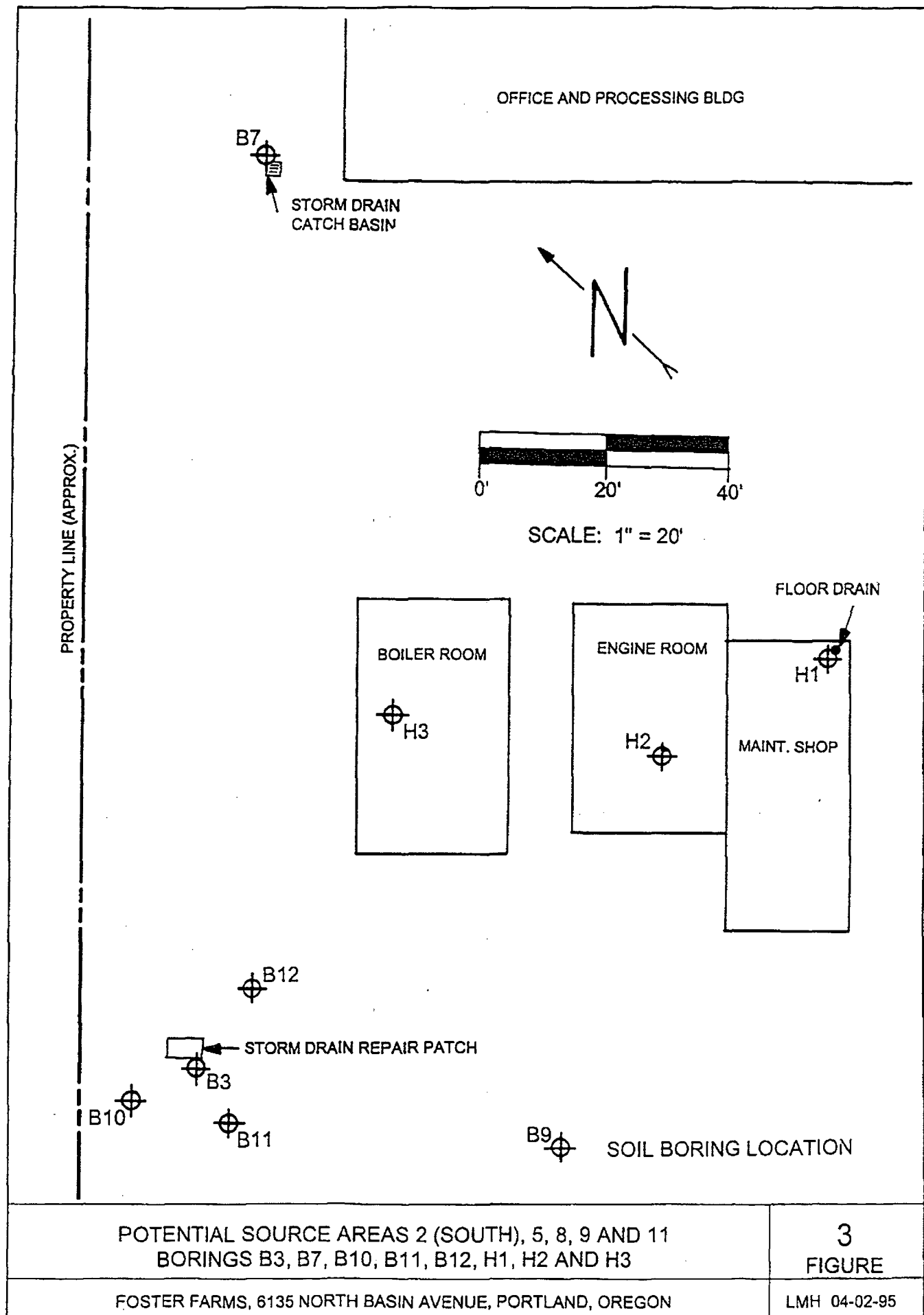


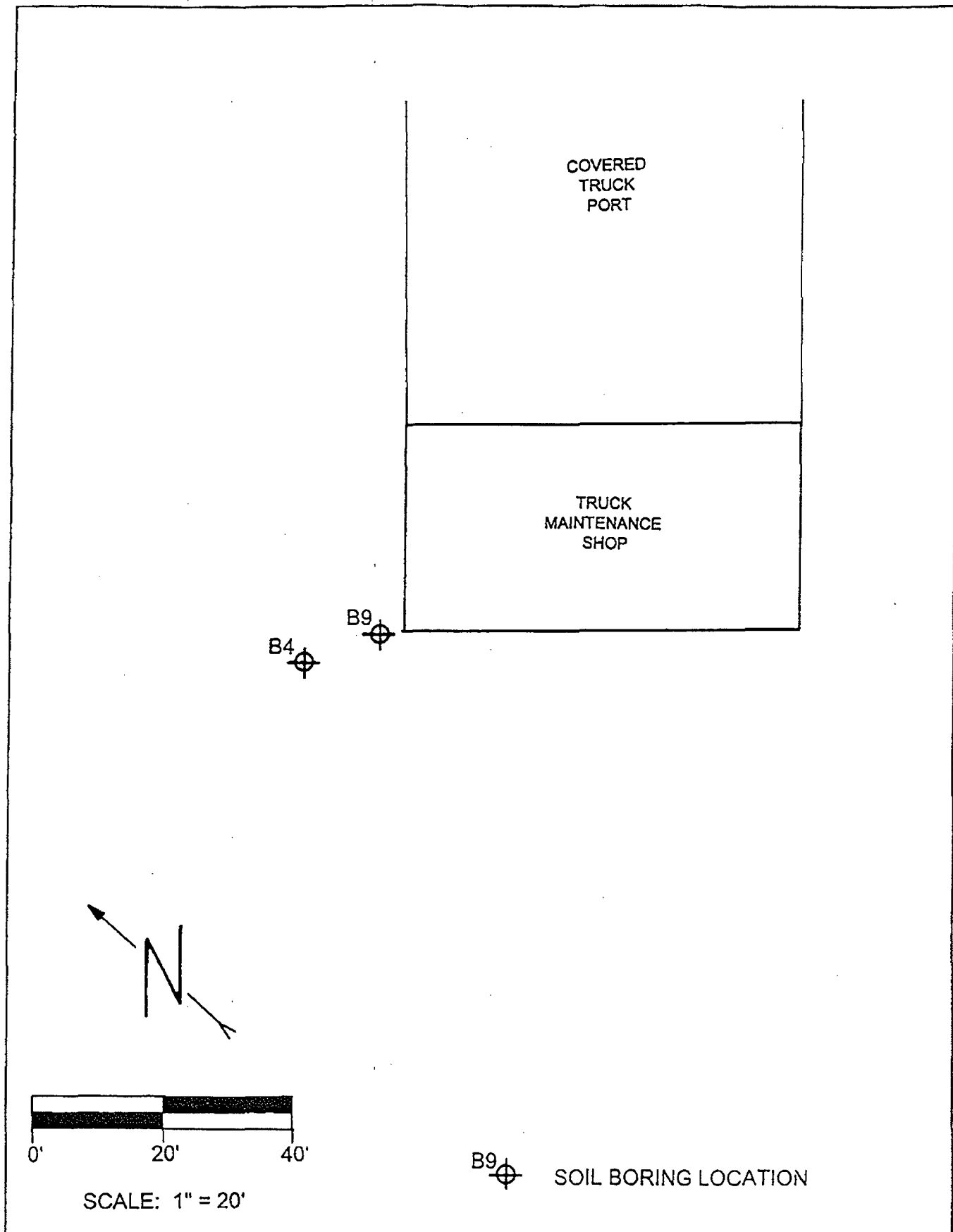
POTENTIAL SOURCE AREAS 2 (NORTH) AND 3
BORINGS B2, B8, B13 AND B14

2
FIGURE

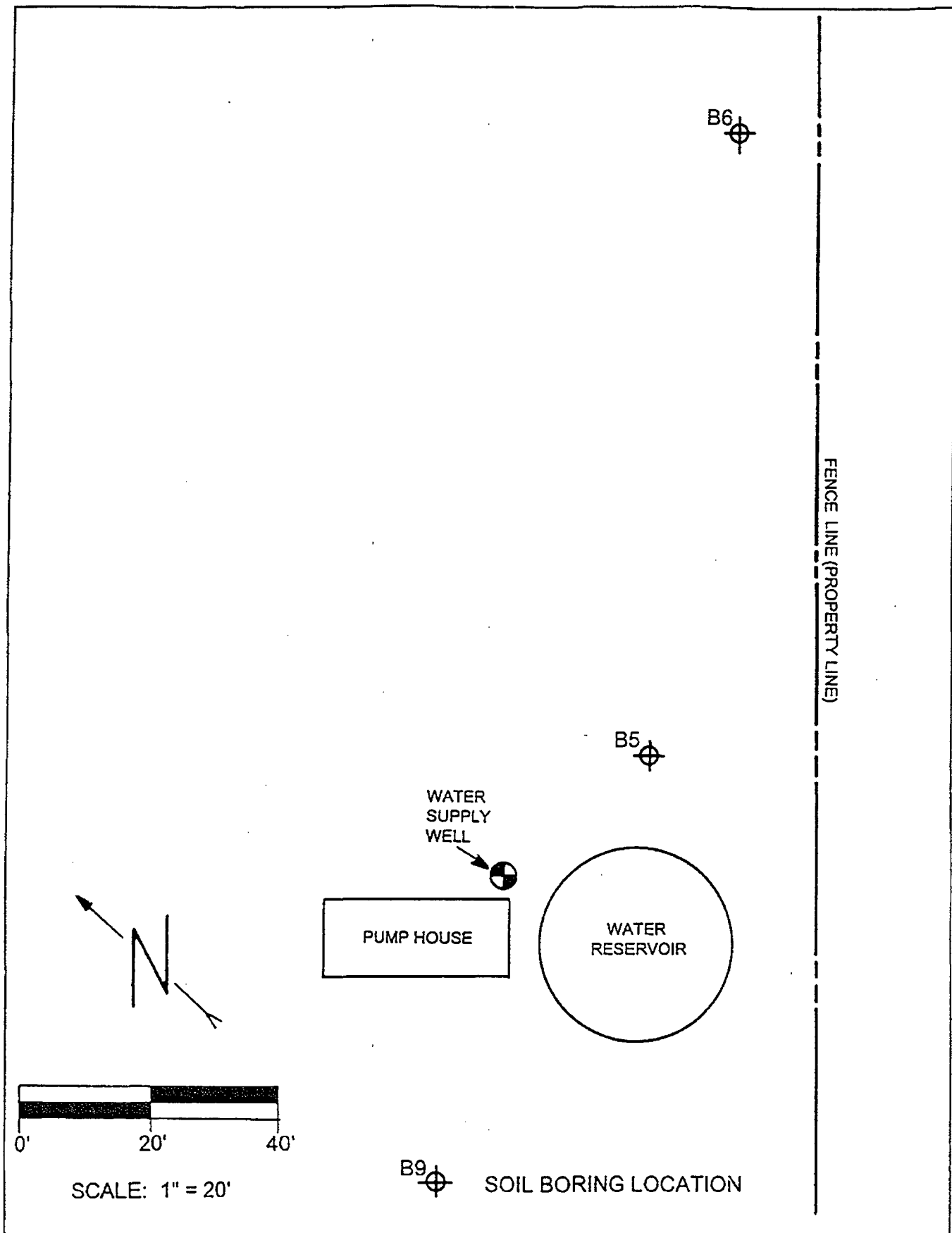
FOSTER FARMS, 6135 NORTH BASIN AVENUE, PORTLAND, OREGON

LMH 04-02-95

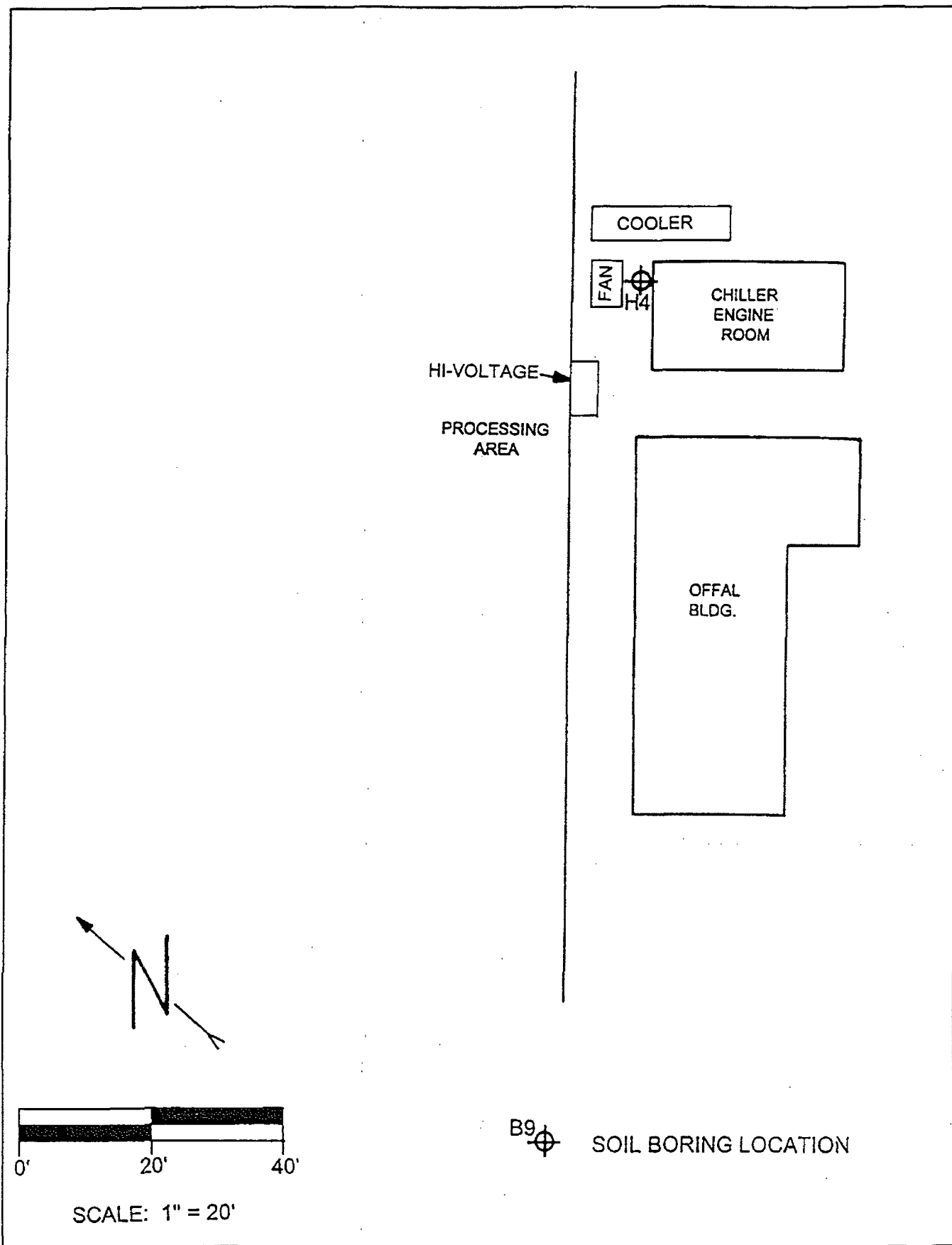




POTENTIAL SOURCE AREAS 12 AND 13 BORINGS B4 AND B9	4 FIGURE
FOSTER FARMS, 6135 NORTH BASIN AVENUE, PORTLAND, OREGON	LMH 04-02-95



<p>POTENTIAL SOURCE AREA 15 BORINGS B5 AND B6</p>	<p>5 FIGURE</p>
<p>FOSTER FARMS, 6135 NORTH BASIN AVENUE, PORTLAND, OREGON</p>	<p>LMH 04-02-95</p>



<p>POTENTIAL SOURCE AREA 16 BORING H4</p>	<p>6 FIGURE</p>
<p>FOSTER FARMS, 6135 NORTH BASIN AVENUE, PORTLAND, OREGON</p>	<p>LMH 04-02-95</p>

SECTION II

TABLE 1
SUMMARY OF INTRUSIVE INVESTIGATIONS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	McLAREN/HART DECEMBER 1993*	REA ENVIRONMENTAL SCIENCE & TESTING (REA) OCTOBER 1994	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Underground Storage Tanks	#3: Former 8,000 gallon gasoline UST	Scope: Completed 1 soil boring near former UST location. Analyzed 1 soil sample from 6' depth and 1 grab groundwater sample for VHOCS, TPH and VACs. Results: <u>Soil:</u> 66 mg/kg TPH/MO and 0.047 mg/kg toluene. All other analytes below detection limits. <u>Groundwater:</u> All analytes below detection limits.	No intrusive investigation performed.	Scope: Completed 3 soil borings: 2 through excavation and one 15' west of excavation. 1 soil boring through excavation was advanced to first encountered groundwater. Collected nine soil samples at depths between 5' and 15' for analysis for TPH/G. Results: No TPH/G present in any sample at concentrations above detection limits.
	#12: Waste oil UST (Also addressed under Soil Staining)	Scope: Completed 1 soil boring near tank. Analyzed 1 soil sample from 16' depth for VHOCS, TPH, VACs, PCBs and PNAs. Analyzed 1 grab groundwater sample for VHOCS, TPH and VACs. Results: <u>Soil:</u> All analytes below detection limits. <u>Groundwater:</u> All analytes below detection limits.	No intrusive investigation performed. Note: Foster Farms performed tank tightness testing on December 7, 1993. Tank tested tight.	No intrusive investigation performed. Note: Foster Farms performed tank tightness testing on March 22, 1995. Tank tested tight.

TABLE 1
SUMMARY OF INTRUSIVE INVESTIGATIONS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	McLAREN/HART DECEMBER 1993*	REA ENVIRONMENTAL SCIENCE & TESTING (REA) OCTOBER 1994	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Soil Staining	#5: West of Office/ Cold Storage Building near storm drain catch basin (REA Area 1)	No intrusive investigation performed.	<p>Scope: Analyzed 2 soil samples from 0.25' to 0.5' depth from an area "10 feet behind" the storm drain for TPH/D and heavy-range petroleum hydrocarbons.</p> <p>Results: Heavy-range TPH detected at concentrations of 33.8 mg/kg and 66.6 mg/kg. TPH/D not present above the detection limit.</p>	<p>Scope: Completed 1 soil boring to 5' depth at a location 1' from storm drain. Analyzed soil samples from 2' and 4' depth for TPH/G/D/MO.</p> <p>Results: <u>2' depth:</u> TPH/D at 100 mg/kg. TPH/G/MO not present above detection limits.. <u>4' depth:</u> TPH/D at 16 mg/kg, TPH/MO detected at 12 mg/kg. TPH/G not present above detection limits.</p>
	#12: Near waste oil tank (Also addressed under USTs)	<p>Scope: Completed 1 soil boring near tank. Analyzed 1 soil sample from 16' depth for VHOCs, TPH, VACs, PCBs and PNAs. Analyzed 1 grab groundwater sample for VHOCs, TPH and VACs.</p> <p>Results: <u>Soil:</u> All analytes below detection limits. <u>Groundwater:</u> All analytes below detection limits.</p>	No intrusive investigation performed.	<p>Scope: Completed 1 soil boring to 3' depth. Analyzed soil samples from 1' and 2.5' depths for TPH/G/D/MO.</p> <p>Results: <u>1' depth:</u> TPH/MO detected at 17 mg/kg. TPH/G/D not present above detection limits. <i>not an oil</i> <u>2.5' depth:</u> TPH/D detected at 12 mg/kg, TPH/MO detected at 28 mg/kg. TPH/G not present above detection limits. <i>Coal Oil</i></p>

Total Petroleum Hydrocarbons

**TABLE 1
SUMMARY OF INTRUSIVE INVESTIGATIONS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON**

CATEGORY	POTENTIAL SOURCE AREA	McLAREN/HART DECEMBER 1993 ^a	REA ENVIRONMENTAL SCIENCE & TESTING (REA) OCTOBER 1994	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Soil Staining, continued	#13: Near Truck Maintenance Shop (REA Area 2)	No intrusive investigation performed.	<p>Scope: Analyzed 2 soil samples from 0.25' to 0.5' depth for TPH/D and heavy-range petroleum hydrocarbons.</p> <p>Results: Heavy-range TPH detected at concentrations of 293 mg/kg and 357 mg/kg. TPH/D not present.</p>	<p>Scope: Completed 1 soil boring to 3' depth. Analyzed soil samples from 1' and 2.5' depths for TPH/G/D/MO.</p> <p>Results: <u>1' depth:</u> TPH/MO detected at 11 mg/kg. TPH/G/D not present above detection limits. <u>2.5' depth:</u> TPH/D detected at 27 mg/kg. TPH/G/MO not present above detection limits.</p>

TABLE 1
SUMMARY OF INTRUSIVE INVESTIGATIONS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	McLAREN/HART DECEMBER 1993*	REA ENVIRONMENTAL SCIENCE & TESTING (REA) OCTOBER 1994	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Soil Staining, continued	#15: Former barrel storage area (REA Areas 3 and 4)	No intrusive investigation performed.	<p>Scope: Collected soil samples from 2 areas in former barrel storage area. Analyzed 2 soil samples from each area from 0.25' to 0.5' depths for TPH/D and heavy-range petroleum hydrocarbons.</p> <p>Results: Heavy-range TPH detected in all 4 soil samples at concentrations between 50.8 and 293 mg/kg. TPH/D not present above detection limits.</p>	<p>Scope: <u>REA Area 3:</u> Completed 1 soil boring to 3' depth and analyzed soil samples from 1' and 2.5' depths for TPH/G/D/MO. <u>REA Area 4:</u> Completed 1 soil boring to 5' depth and analyzed soil samples from 2' and 4' depths for TPH/G/D/MO.</p> <p>Results: <u>REA Area 3:</u> <u>1' depth:</u> TPH/MO detected at 23 mg/kg. TPH/G/D not present above detection limits. <u>2.5' depth:</u> TPH/D detected at 20 mg/kg. TPH/G/MO not present above detection limits. <u>REA Area 4:</u> <u>2' depth:</u> TPH/MO detected at 19 mg/kg. TPH/G/D not present above detection limits. <u>4' depth:</u> TPH/G/D/MO not present above detection limits.</p>
Concrete or Asphalt Staining	#7: Transformer Area	No intrusive investigation performed.	No intrusive investigation performed.	No intrusive investigation performed due to presence of subsurface utilities as indicated by utility locating contractor.

**TABLE 1
SUMMARY OF INTRUSIVE INVESTIGATIONS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON**

CATEGORY	POTENTIAL SOURCE AREA	McLAREN/HART DECEMBER 1993*	REA ENVIRONMENTAL SCIENCE & TESTING (REA) OCTOBER 1994	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Concrete or Asphalt Staining, continued	#8: Boiler Room	Scope: Completed 2 hand auger borings to 0.75' depth. Analyzed 1 sample of gravel sub-base from bottom of each boring for VHOCS, TPH, VACs, PCBs and PNAs. Results: TPH/MO detected at concentrations of 69 and 85 mg/kg. Toluene detected at concentrations of 0.046 and 0.026 mg/kg. No other analytes present at concentrations above detection limits.	No intrusive investigation performed.	Scope: Completed 1 hand auger soil boring to 1.25' depth. Analyzed sample of sandy matrix of fill material matrix (15% of fill) from bottom of boring below gravel sub-base for TPH/G/D/MO. Results: TPH/D detected at a concentration of 120 mg/kg. No other analytes present at concentrations above detection limits.
	#9: Engine Room	Scope: Completed 2 hand auger borings to 0.75' depth. Analyzed 1 sample of gravel sub-base from bottom of each boring for VHOCS, TPH, VACs, PCBs and PNAs. Results: TPH/MO detected at concentrations of 75 and 110 mg/kg. Toluene detected at concentrations of 0.017 and 0.025 mg/kg. Aroclor 1254 detected at concentrations of 0.13 and 0.25 mg/kg. No other analytes present at concentrations above detection limits.	No intrusive investigation performed.	Scope: Completed 1 hand auger soil boring to 1.25' depth. Analyzed sample of sandy matrix of fill material (15% of fill) from bottom of boring below gravel sub-base for TPH/G/D/MO. Results: No analytes present at concentrations above detection limits.

TABLE 1
SUMMARY OF INTRUSIVE INVESTIGATIONS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	McLAREN/HART DECEMBER 1993*	REA ENVIRONMENTAL SCIENCE & TESTING (REA) OCTOBER 1994	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Concrete or Asphalt Staining, continued	#10: Oil/water separator	<p>Scope: Completed 2 hand auger borings to 0.75' depth. Analyzed 1 sample of gravel sub-base from bottom of each boring for VHOCs, TPH, VACs, PCBs and PNAs.</p> <p>Results: TPH/MO detected at concentrations of 350 and 490 mg/kg. Toluene detected at concentrations of 0.790 and 0.230 mg/kg. Aroclor 1254 detected at concentrations of 1.80 and 0.53 mg/kg. No other analytes present at concentrations above detection limits.</p>	No intrusive investigation performed.	No intrusive investigation performed due to subsurface conditions. Concrete/asphalt coring at Potential Source Areas 8, 9, 11 and 16 was performed on March 22, 1995. Completion of borings at these locations indicated that the fill material prohibited completion of a soil boring using the Geoprobe drive sampler. Hand sampling beneath probable depth of fill material could not be successfully accomplished within available time.
	#11: Maintenance Shop	No intrusive investigation performed.	No intrusive investigation performed.	<p>Scope: Completed 1 hand auger soil boring to 2' depth. Analyzed sample of sandy matrix of fill material (15% of fill) from bottom of boring below gravel sub-base for TPH//G/D/MO.</p> <p>Results: TPH/D detected at a concentration of 68 mg/kg. No other analytes present at concentrations above detection limits.</p>

**TABLE 1
SUMMARY OF INTRUSIVE INVESTIGATIONS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON**

CATEGORY	POTENTIAL SOURCE AREA	McLAREN/HART DECEMBER 1993^a	REA ENVIRONMENTAL SCIENCE & TESTING (REA) OCTOBER 1994	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Concrete or Asphalt Staining, continued	#14: Truck Maintenance Shop	No intrusive investigation performed.	No intrusive investigation performed.	No intrusive investigation performed. Inspection of the Truck Maintenance Shop indicated that previous petroleum product storage and associated concrete staining had been removed.
	#16: Near Chiller Engine Room	No intrusive investigation performed.	No intrusive investigation performed.	Scope: Completed 1 hand auger soil boring to 0.75' depth. Analyzed sample of fill material matrix (10% of fill material) from bottom of boring below gravel sub-base for TPH/G/D/MO. Results: TPH/MO detected at a concentration of 28 mg/kg. No other analytes present at concentrations above detection limits.

TABLE 1
SUMMARY OF INTRUSIVE INVESTIGATIONS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	McLAREN/HART DECEMBER 1993 ^a	REA ENVIRONMENTAL SCIENCE & TESTING (REA) OCTOBER 1994	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Other Areas	#2: Damaged storm drains	No intrusive investigation performed.	No intrusive investigation performed.	<p>Scope: 5 soil borings completed: 1 at northern rupture and 4 at southern rupture. 3 soil samples collected from each boring and analyzed for TPH/G/D/MO.</p> <p>Results: TPH/G not present in any soil sample above detection limits. <u>5' depth:</u> 4 of 5 samples contained up to 14 mg/kg TPH/D and/or 120 mg/kg TPH/MO All other results below detection limits. <u>7' depth:</u> 4 of 5 samples contained up to 12 mg/kg TPH/D and 97 mg/kg TPH/MO All other results below detection limits. <u>15' depth:</u> 2 of 5 samples contained up to 15 mg/kg TPH/D and/or 22 mg/kg TPH/MO All other results below detection limits.</p>

^aAnalytical results from McLaren/Hart investigation taken from original laboratory reports.

Note - Potential source areas not addressed by E&ES:

- #1: Former Cenex diesel tanks - closed by ODEQ
- #4: ACBMs - property management issue.
- #6: Chemical Storage - chemicals no longer stored outside building.
- #17: Stormwater discharge - operations issue.
- #18: Dredge fill - regional condition.

Abbreviations:

VHOCs: volatile halogenated organic compounds
TPH: total petroleum hydrocarbons
VACs: volatile aromatic compounds
PCBs: polychlorinated biphenyls
PNAs: polynuclear aromatic compounds
TPH/G: gasoline-range TPH
TPH/D: diesel-range TPH

TPH/MO: motor oil-range TPH
ODEQ: Oregon Department of Environmental Quality

TABLE 2
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS^a
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	SOIL SAMPLE ID	DEPTH (feet below ground surface)	CONCENTRATION (mg/kg) ^b		
				GASOLINE RANGE	DIESEL RANGE	MOTOR OIL RANGE
Underground Storage Tanks	#3: Former Gasoline UST	B8-1	11	<10	--	--
		B8-2	15	<10	--	--
		B13-1	9	<10	--	--
		B13-2	7	<10	--	--
		B13-3	15	<10	--	--
		B14-1	5	<10	--	--
		B14-2	9	<10	--	--
		B14-3	15	<10	--	--
Soil Staining	#5: Near Storm Drain Catch Basin	B7-1	2	<10	100	<10
		B7-2	4	<10	16	12
	#12: Near Waste Oil Tank	B9-1	1	<10	<10	17
		B9-2	2.5	<10	12	28
	#13: Near Truck Maintenance Shop	B4-1	1	--	--	11
		B4-2	2.5	--	--	27
	#15: Barrel Storage Area	B5-1	1	--	--	23
		B5-2	2.5	--	--	20
		B6-1	2	--	--	19
		B6-2	4	--	--	<10
Concrete or Asphalt Staining	#8: Boiler Room	H3-1	1.25	<10	<10	120
	#9: Engine Room	H2-1	1.25	<10	<10	<10
	#11: Maintenance Shop	H1-1	2	<50	68	<50
	#16: Near Chiller Engine Room	H4-1	0.75	<10	<10	28

TABLE 2
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS^a
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	SOIL SAMPLE ID	DEPTH (feet below ground surface)	CONCENTRATION (mg/kg) ^b		
				GASOLINE RANGE	DIESEL RANGE	MOTOR OIL RANGE
Other Areas	#2: Damaged Storm Drains	B2-1	5.5	<10	16	26
		B2-2	7.5	<10	<10	<10
		B2-3	15	<10	<10	<10
		B3-1	5.5	<10	<10	<10
		B3-2	7.5	<10	<10	<10
		B3-3	15	<10	15	22
		B10-1	5	<10	14	120
		B10-2	7.5	<10	12	86
		B10-3	15	<10	<10	19
		B11-1	5	<10	10	84
		B11-2	7	<10	10	96
		B11-3	15.5	<10	<10	<10
		B12-1	5	<10	<10	21
		B12-2	7	<10	10	97
		B12-3	15	<10	<10	<10

^a Samples collected from UST area (borings B8, B13, B14) analyzed using Oregon Administrative Rule (OAR) TPH gasoline method; all other samples analyzed using modified EPA Method 8015.

^bmilligrams per kilograms.

TABLE 3
STATUS OF POTENTIAL SOURCE AREAS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Underground Storage Tanks	#1: Cenex Diesel Tanks	<p>Status: Tanks removed. Case closed.</p> <p>Recommendation: No action.</p> <p>Rationale: Closure granted by ODEQ.</p>
	#3: Former 8,000 gallon gasoline UST	<p>Status: Tank removed.</p> <p>Recommendation: No action.</p> <p>Rationale:</p> <ul style="list-style-type: none"> (1) No TPH/G detected in any of nine soil samples collected from 4 soil borings completed in the tank excavation and vicinity. (2) No TPH/G detected in a grab groundwater sample collected from a boring in the tank vicinity.
	#12: Waste oil UST (Also addressed under Soil Staining)	<p>Status: Active, permitted, monitoring program consists of annual tightness testing.</p> <p>Recommendation: Adhere to permit requirements and follow environmentally prudent operation procedures.</p> <p>Rationale:</p> <ul style="list-style-type: none"> (1) Tank passed tightness tests in December 1993 and March 1995. (2) No analytes detected in soil or groundwater samples collected from boring near tank.
Soil Staining	#5: West of Office/ Cold Storage Building near storm drain catch basin	<p>Status: Area is currently used for parking of employee vehicles.</p> <p>Recommendation: Prohibit vehicular parking on storm drain catch basin and in drainage swale north of catch basin.</p> <p>Rationale:</p> <ul style="list-style-type: none"> (1) The potential exists for releases into the catch basin from parked cars. (2) TPH concentrations detected in soil samples collected from borings at or near the catch basin are not at levels of concern. (3) TPH concentrations in soil samples collected at or near the catch basin decrease with depth. (4) No soil staining observed during E&ES 1995 site inspection.
	#12: Near waste oil tank (Also addressed under USTs)	<p>Status: Minor soil staining observed during E&ES 1995 site inspection.</p> <p>Recommendation: No action other than following environmentally prudent operation procedures.</p> <p>Rationale:</p> <ul style="list-style-type: none"> (1) TPH concentrations in soil samples collected from soil borings near the tank were low (≤ 7 mg/kg). (2) No analytes detected groundwater sample collected from boring near tank.

TABLE 3
STATUS OF POTENTIAL SOURCE AREAS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Soil Staining, continued	#13: Near Truck Maintenance Shop	<p>Status: Area currently used for temporary vehicular parking.</p> <p>Recommendation: No action other than following environmentally prudent operation procedures.</p> <p>Rationale: TPH concentrations at depths greater than 1' were low (up to 27 mg/kg).</p>
	#15: Former barrel storage area	<p>Status: Portions of area currently used for vehicular parking.</p> <p>Recommendation: No action other than following environmentally prudent operation procedures.</p> <p>Rationale: (1) Area no longer used for barrel storage. (2) TPH concentrations at depths greater than 1' were low (≤ 23 mg/kg).</p>
Concrete or Asphalt Staining	#7: Transformer area	<p>Status: Active.</p> <p>Recommendation: No action other than following environmentally prudent operation procedures.</p> <p>Rationale: Concrete staining observed during E&ES 1995 site inspection appeared to be restricted to the upper concrete surface of the concrete pads and did not appear to impact surrounding asphalt.</p>
	#8: Boiler Room	Status: Active.
	#9: Engine Room	Recommendation: No action other than following environmentally prudent operation procedures.
	#11: Maintenance Shop	<p>Rationale: (1) Visual inspection of concrete cores (9 to 12 inches thick) from areas adjacent to the trenches or floor drain did not indicate significant penetration of surface staining, suggesting that the TPH measured in the subsurface fill materials were present when the fill materials were imported. (2) Samples collected from the sandy matrix that comprises approximately 15% of the total mass of the fill materials showed a maximum TPH/MO concentration of 120 mg/kg. On a total mass basis, concentrations in the fill materials should be approximately an order of magnitude less than the levels measured in the sandy matrix.</p>

TABLE 3
STATUS OF POTENTIAL SOURCE AREAS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Concrete or Asphalt Staining, Continued	#10: Oil/water separator	<p>Status: Active.</p> <p>Recommendation: No action other than following environmentally prudent operation procedures.</p> <p>Rationale:</p> <ul style="list-style-type: none"> (1) Visual inspection of concrete cores (9 to 12 inches thick) did not indicate significant penetration of surface staining. (2) Samples collected from the finer-textured material that comprise approximately 15% of the total mass of the fill materials showed a maximum TPH/MO concentration of 120 mg/kg. On a total mass basis, concentrations in the fill materials should be approximately an order of magnitude less than the levels measured in the finer-textured materials.
	#14: Truck Maintenance Shop	<p>Status: Shop floor in former product storage area has been cleaned of all visible staining. Waste oil sump (actually a waste oil pan overflow sump) and associated piping active. Concrete-lined sump was steam-cleaned within the last 12 months.</p> <p>Recommendation: No action unless integrity of the facilities become suspect. Surface/near-surface sampling should be considered if the existing facilities are remodelled or removed.</p> <p>Rationale:</p> <ul style="list-style-type: none"> (1) Area remains active and under constant observation. (2) Concrete staining in Potential Source Areas 8, 9 and 11 did not show significant penetration of the concrete.
	#16: Near Chiller Engine Room	<p>Status: Area in use. Recently deposited petroleum residues observed during E&ES 1995 site inspection.</p> <p>Recommendation: Modify facility operations to prevent future releases in area.</p> <p>Rationale:</p> <ul style="list-style-type: none"> (1) TPH concentrations at 0.75' depth were low (28 mg/kg). (2) Petroleum product occurrence appeared to have resulted from incidental losses during facility operation, not a specific release or as a result of equipment operation.

TABLE 3
STATUS OF POTENTIAL SOURCE AREAS
MORF FAMILY TRUST PROPERTY/FOSTER FARMS FACILITY
6135 NORTH BASIN AVENUE, PORTLAND, OREGON

CATEGORY	POTENTIAL SOURCE AREA	ENERGY & ENVIRONMENTAL SOLUTIONS (E&ES) MARCH 1995
Other Areas	#2: Damaged storm drains	<p>Status: Ruptures in the drain line have been repaired.</p> <p>Recommendation: No action other than following environmentally prudent operation procedures. Soils data should be reviewed prior to renovation or removal of drain line.</p> <p>Rationale:</p> <ol style="list-style-type: none"> (1) Ruptures have been repaired. (2) TPH concentrations detected in soil samples collected from borings at or near the storm drain ruptures attenuated from a maximum concentration of 13 mg/kg TPH/D and 120 mg/kg TPH/MO to a maximum concentration of 15 mg/kg TPH/D and 22 mg/kg TPH/MO at depths (15' bgs) above first encountered ground water (16.5' bgs). (3) TPH concentrations in soil samples collected at or near the storm drain ruptures decrease with depth.

Abbreviations:

TPH: total petroleum hydrocarbons.
 TPH/G: gasoline-range TPH
 TPH/D: diesel-range TPH
 TPH/MO: motor oil-range TPH
 ODEQ: Oregon Department of Environmental Quality

SECTION III

SOIL BORING LOG

BORING LOCATION:		Ruptured storm drain: northern rupture		BORING NO:	B2
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT:	Foster Farms
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY:	LMH
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH:	16.0'
GROUT:		Bentonite pellets		DATE:	03-21-95
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	—	—	—	ASPHALT.	
4 - 6	75%	B2-1	5.5 - 6.0	SAND (SP): very dark gray (5Y 3/1), well sorted, fine-grained, loose, moist, moderate petroleum odor. PID = 460 ppm.	
6 - 8	80%	B2-2	7.5 - 8.0	SAND: same as above, petroleum odor decreasing with depth. PID = >2000 ppm.	
14 - 16	90%	B2-3	15 - 15.5	SILT (ML): very dark gray (5Y 3/1), loose, moist, decomposed organic matter odor. PID = 560 ppm.	
				SAND (SP) at 15.5': very dark gray (5Y 3/1), well sorted, fine-grained, loose, moist, moderate petroleum odor.	
				BOTTOM OF HOLE 16.0'.	

SOIL BORING LOG

BORING LOCATION:		Ruptured storm drain: southern rupture		BORING NO:	B3
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT:	Foster Farms
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY:	LMH
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH:	16.0'
GROUT:		Bentonite pellets		DATE:	03-21-95
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	--	--	--	BASEROCK.	
4 - 6	90%	B3-1	5.5 - 6.0	SANDY SILT (ML): black (5Y 2.5/1), very fine-grained sand, loose, moist, moderate petroleum odor. Coarsens to SILTY SAND (SM) and petroleum odor decreases with depth. PID = 315 ppm.	
6 - 8	80%	B3-2	7.5 - 8.0	SAND (SP): very dark gray (5Y 3/1), well sorted, fine-grained, loose, moist, slight petroleum odor. PID = 410 ppm.	
14 - 16	85%	B3-3	15 - 15.5	SAND: same as above, decomposed organic matter odor. PID = 1300 ppm.	
				BOTTOM OF HOLE 16.0'.	

SOIL BORING LOG

BORING LOCATION:		Near Truck Maint. Shop (REA area 2)		BORING NO: B4	
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT: Foster Farms	
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY: LMH	
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH: 3.0'	
GROUT:		Bentonite pellets		DATE: 03-21-95	
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	—	—	—	BASEROCK.	
1 - 3	95%	B4-1	1.0 - 1.5	SANDY SILT (ML): dark olive gray (5Y 3/2), very fine-grained sand, loose, moist, wood fragments, slight decomposed organic matter odor. PID = 315 ppm.	
		B4-2	2.5 - 3.0	2.5': SAND (SP): very dark gray (5Y 3/1), well sorted, fine-grained, loose, moist, slight petroleum odor.	
				BOTTOM OF HOLE 3.0'.	

SOIL BORING LOG

BORING LOCATION:		Barrel storage area, near water reservoir (REA area 3)		BORING NO:	B5
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT:	Foster Farms
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY:	LMH
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH:	3.0'
GROUT:		Bentonite pellets		DATE:	03-21-95
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	—	—	—	BASEROCK.	
1 - 3	95%	B5-1 B5-2	1.0 - 1.5 2.5 - 3.0	SAND (SP): dark olive gray (5Y 3/2), well sorted, very fine-grained, loose, moist, no odor. PID = 536 ppm.	
				BOTTOM OF HOLE 3.0'.	

SOIL BORING LOG

BORING LOCATION:		Barrel storage area, midway along fenceline (REA area 4)		BORING NO:	B6
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT:	Foster Farms
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY:	LMH
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH:	5.0'
GROUT:		Bentonite pellets		DATE:	03-21-95
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	—	—	—	BASEROCK.	
1 - 3	50%	B6-1	2.0 - 2.5	SANDY GRAVEL (GW): black (5Y 2.5/1), poorly sorted, moist, no odor. Insufficient sample volume for headspace PID screening.	
3 - 5	50%	B6-2	3.0 - 3.5	SAND (SP): very dark gray (5Y 3/1), fine-grained, well sorted, loose, moist, no odor. PID = 35 ppm.	
				BOTTOM OF HOLE 5.0'.	

SOIL BORING LOG

BORING LOCATION:		Soil staining at storm drain (REA area 1)		BORING NO:	B7
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT:	Foster Farms
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY:	LMH
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH:	5.0'
GROUT:		Bentonite pellets		DATE:	03-23-95
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	—	—	—	BASEROCK.	
1 - 3	30%	B7-1	2.0 - 2.5	SANDY GRAVEL WITH CLAY (GW-GC): dark gray (2.5Y 4/1), poorly sorted, loose, wet, slight petroleum odor. Insufficient sample volume for headspace PID screening.	
3 - 5	25%	B7-2	4.0 - 4.5	SILTY SAND (SM): very dark gray (5Y 3/1), fine-grained, well sorted, loose, moist, very slight decomposed organic matter/petroleum odor. Insufficient sample volume for headspace PID screening.	
				BOTTOM OF HOLE 5.0'.	

SOIL BORING LOG

BORING LOCATION:		Former gasoline storage tank - center of excavation		BORING NO: B8	
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT: Foster Farms	
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY: LMH	
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH: 16.0'	
GROUT:		Bentonite pellets		DATE: 03-21-95	
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	—	—	—	ASPHALT.	
10 - 12	30%	B8-1	11.5 - 12.0	SAND (SP): very dark gray (5Y 3/1), well sorted, medium-grained, well-sorted, loose, moist, moderate gasoline odor. PID = >2000 ppm.	
14 - 16	30%	B3-2	15.0 - 15.5	SILTY SAND (SM): very dark gray (5Y 3/1), very fine-grained, well sorted, loose, moist, slight gasoline odor. PID = 1700 ppm.	
			BOTTOM OF HOLE 16.0'.		

SOIL BORING LOG

BORING LOCATION:		Soil staining near waste oil tank		BORING NO: B9	
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT: Foster Farms	
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY: LMH	
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH: 3.0'	
GROUT:		Bentonite pellets		DATE: 03-23-95	
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	—	—	—	BASEROCK.	
1 - 3	90%	B9-1	1 - 1.5	SILTY SAND (SM): brown (10YR 4/3), fine-grained, moderately firm, moist, no odor. PID = 300 ppm.	
		B9-2	2.5 - 3.0	2.5': SAND (SW): dark grayish brown (2.5Y4/2), very fine- to medium-grained sand, poorly sorted, moist, no odor.	
				BOTTOM OF HOLE 3.0'.	

SOIL BORING LOG

BORING LOCATION:		Ruptured storm drain: southern rupture, SW of rupture		BORING NO:	B10
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT:	Foster Farms
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY:	LMH
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH:	16.0'
GROUT:		Bentonite pellets		DATE:	03-23-95
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	—	—	—	BASEROCK.	
4 - 6	30%	B10-1	5.0 - 5.5	SILT (ML): very dark gray (2.5Y 3/1), soft, moist, strong petroleum odor. PID = 620 ppm.	
6 - 8	30%	B10-2	7.5 - 8.0	SANDY SILT (SM): black (5Y 2.5/1), fine-grained sand, soft, moist, moderate petroleum odor. PID = 1460 ppm.	
14 - 16	30%	B10-3	15.0 - 15.5	SAND (SP): very dark gray (5Y 3/1), fine-grained, well sorted, loose, moist, slight decomposed organic matter odor. PID = 348 ppm.	
				BOTTOM OF HOLE 16.0'.	

SOIL BORING LOG

BORING LOCATION:		Ruptured storm drain: southern rupture, SE of rupture		BORING NO: B11	
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT: Foster Farms	
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY: LMH	
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH: 16.0'	
GROUT:		Bentonite pellets		DATE: 03-23-95	
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	—	—	—	BASEROCK.	
4 - 6	35%	B11-1	5.0 - 5.5	SILTY SAND (SM): very dark gray (5Y 3/1), very fine-grained, well sorted, loose, moist, moderate petroleum odor. PID = 1120 ppm. SILTY SAND: same as above. Insufficient sample volume for PID headspace screening.	
6 - 8	25%	B11-2	7.0 - 7.5		
14 - 16	40%	B11-3	15 - 15.5	SAND (SP): very dark gray (5Y 3/1), well sorted, fine-grained, loose, moist, slight decomposed organic matter odor. PID = 690 ppm.	
				BOTTOM OF HOLE 16.0'.	

SOIL BORING LOG

BORING LOCATION:		Ruptured storm drain: southern rupture, NE of rupture		BORING NO:	B12
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT:	Foster Farms
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY:	LMH
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH:	16.0'
GROUT:		Bentonite pellets		DATE:	03-23-95
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	---	---	---	BASEROCK.	
4 - 6	40%	B12-1	5.0 - 5.5	SAND WITH SILT (SP-SM): very dark gray (2.5Y 3/1), very fine-grained, well-sorted, loose, moist, strong petroleum odor. PID = >2000 ppm.	
6 - 8	40%	B12-2	7.0 - 7.5	SILTY SAND (SM): very dark gray (2.5Y 3/1), very fine-grained, well sorted, loose, moist, ,moderate petroleum odor. PID = >2000 ppm.	
14 - 16	45%	B12-3	15.0 -15.5	SANDY SILT (ML): very dark gray (2.5Y 3/1), very fine-grained, well sorted, loose, moist, decomposed organic matter odor. PID = 820 ppm.	
				15':	SAND (SP): very dark gray (5Y 3/1), well sorted, fine-grained, loose, moist, slight decomposed organic matter odor.
				BOTTOM OF HOLE 16.0'.	

SOIL BORING LOG

BORING LOCATION:		Former gasoline tank - center of excavation		BORING NO:	B13
DRILLING COMPANY:		Geotech Explorations, Tualatin, OR		PROJECT:	Foster Farms
DRILLING METHOD:		Geoprobe GH-40		LOGGED BY:	LMH
SAMPLING METHOD:		2' x 1" diameter plastic tube		TOTAL DEPTH:	18.0'
GROUT:		Bentonite pellets		DATE:	03-23-95
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS	
	Recovery	Sample ID	Depth		
SURFACE	—	—	—	ASPHALT.	
6 - 8	40%	B13-1	7.0 - 7.5	<div>SILTY CLAY (CL): very dark gray (2.5Y 3/1), soft, moist, strong gasoline odor. PID = >2000 ppm.</div> <div>SILTY CLAY: same as above. PID = 410 ppm.</div> <div>9.5": SAND (SP): very dark gray (2.5Y 3/1), medium-grained, well sorted, loose, moist, moderate gasoline odor. SAND: same as above, slight gasoline odor. Insufficient sample volume for PID headspace screening.</div> <div>SAND WITH SILT (SP): very dark gray (5Y 3/1), fine-grained, well sorted, loose, moist, moderate decomposed organic matter odor. PID = 1252 ppm.</div> <div>SAND (SP): very dark gray (2.5Y 3/1), medium-grained, well sorted, loose, moist to wet, saturated at 16.5', decomposed organic matter odor. PID - 300 ppm.</div>	
8 - 10	75%	B13-2	9.0 - 9.5		
10 - 12	25%	B13-3	11.0 - 11.5		
12 - 14	0%				
14 - 16	80%	B3-4	15.0 - 15.5		
16 - 18	95%				
				BOTTOM OF HOLE 18.0'.	

SOIL BORING LOG

BORING LOCATION: East of former gasoline tank				BORING NO: B14
DRILLING COMPANY: Geotech Explorations, Tualatin, OR				PROJECT: Foster Farms
DRILLING METHOD: Geoprobe GH-40				LOGGED BY: LMH
SAMPLING METHOD: 2' x 1" diameter plastic tube				TOTAL DEPTH: 16.0'
GROUT: Bentonite pellets				DATE: 03-23-95
DEPTH INTERVAL (feet)	SAMPLES			LITHOLOGIC DESCRIPTION AND REMARKS
	Recovery	Sample ID	Depth	
SURFACE	—	—	—	ASPHALT.
4 - 6	60%	B14-1	5.0 - 5.5	SILTY SAND (SM): very dark gray (2.5Y 3/1), very fine-grained, loose, moist, slight gasoline odor. PID = 500 ppm.
8 - 10	70%	B14-2	9.0 - 9.5	SAND (SP): very dark gray (5Y 3/1), well sorted, fine-grained, loose, moist, slight gasoline odor. PID = 350 ppm.
14 - 16	85%	B14-3	15.0 - 15.5	SILTY SAND: same as above, no odor. PID - 220 ppm.
				BOTTOM OF HOLE 16.0'.

SOIL BORING LOG

BORING LOCATION:		Maintenance Shop near floor drain	BORING NO:	H1
DRILLING/SAMPLING METHOD:		Concrete coring, pick and trowel	PROJECT:	Foster Farms
TOTAL DEPTH:		24"	LOGGED BY:	LMH
GROUT:		Concrete	DATE:	03-23-95
DEPTH INTERVAL (inches)	SAMPLES		LITHOLOGIC DESCRIPTION AND REMARKS	
	Sample ID	Depth		
0 - 12	---	---	CONCRETE: no discoloration or odor.	
12 - 14	---	---	GRAVEL WITH SAND (SP): dark gray (2.5Y 4/1), 90% rounded gravels to 10", 10% medium grained sand, well sorted, dry, no odor.	
14 - 24	H1-1	21 - 24	SANDY GRAVEL (SP): gray (N5), 85% very hard angular clasts to > 10"; 15% dark grayish brown (2.5Y 4/2) fine-to medium-grained sand matrix; dry, no odor. Sample collected of sand matrix. PID = >2000 ppm	
			BOTTOM OF HOLE 24".	

SOIL BORING LOG

BORING LOCATION:		Engine Room	BORING NO:	H2
DRILLING/SAMPLING METHOD:		Concrete coring, pick and trowel	PROJECT:	Foster Farms
TOTAL DEPTH:		21"	LOGGED BY:	LMH
GROUT:		Concrete	DATE:	03-23-95
DEPTH INTERVAL (inches)	SAMPLES		LITHOLOGIC DESCRIPTION AND REMARKS	
	Sample ID	Depth		
0 - 9	---	---	CONCRETE: no discoloration or odor.	
9 - 12	---	---	GRAVEL WITH SAND (SP): dark gray (2.5Y 4/1), 90% rounded gravels to 0.5", 10% medium grained sand, well sorted, dry, no odor.	
12 - 21	H2-1	18 - 21	SANDY GRAVEL (SP): gray (N5), 85% very hard angular clasts to > 10"; 15% dark grayish brown (2.5Y 4/2) fine-to medium-grained sand matrix; dry, no odor. Sample collected of sand matrix. PID = >1590 ppm	
			BOTTOM OF HOLE 21".	

SOIL BORING LOG

BORING LOCATION:		Boiler Room		BORING NO: H3	
DRILLING/SAMPLING METHOD:		Concrete coring, pick and trowel		PROJECT: Foster Farms	
TOTAL DEPTH:		21"		LOGGED BY: LMH	
GROUT:		Concrete		DATE: 03-23-95	
DEPTH INTERVAL (Inches)	SAMPLES		LITHOLOGIC DESCRIPTION AND REMARKS		
	Sample ID	Depth			
0 - 9.5	---	---	CONCRETE: no discoloration or odor.		
9.5 - 13	---	---	GRAVEL WITH SAND (SP): dark gray (2.5Y 4/1), 90% rounded gravels to 0.5", 10% medium grained sand, well sorted, dry, no odor.		
13 - 21	H3-1	18 - 21	SANDY GRAVEL (SP): gray (N5), 90% very hard angular clasts to > 10"; 10% dark grayish brown (2.5Y 4/2) fine-to medium-grained sand matrix; dry, no odor. Sample collected of sand matrix. PID = >1100		
			BOTTOM OF HOLE 21".		

SOIL BORING LOG

BORING LOCATION:		Near Chiller Engine Room Room		BORING NO:	H4
DRILLING/SAMPLING METHOD:		Concrete coring, pick and trowel		PROJECT:	Foster Farms
TOTAL DEPTH:		9"		LOGGED BY:	LMH
GROUT:		Concrete		DATE:	03-23-95
DEPTH INTERVAL (Inches)	SAMPLES		LITHOLOGIC DESCRIPTION AND REMARKS		
	Sample ID	Depth			
0 - 4	---	---	ASPHALT.		
4 - 6	---	---	SANDY GRAVEL (SW): brown (10YR 4/3), 50% well-rounded gravels, 50% fine- to medium-grained sand, moist, no odor. PID = 460 ppm		
6 - 9	H4-1	6 - 9	SANDY GRAVEL (SP): gray (N5), 85% very hard angular clasts to > 10"; 15% dark grayish brown (2.5Y 4/2) fine-to medium-grained sand matrix; dry, no odor. Sample collected of sand matrix. PID = 860 ppm		
			BOTTOM OF HOLE 9".		

SECTION IV

FF 134

MBT Environmental
Laboratories

3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292



Date: March 29, 1995
LP #: 11435

Louise Hauke
E & ES
1784 Picasso #A
Davis, CA 95616

Dear Ms. Hauke:

Enclosed are the laboratory results for the 12 samples submitted to MBT Environmental Laboratories on March 23, 1995, for the project Lynden Farms.

The analysis requested is:

Modified EPA 8015 (12 - Soil)

The report consists of the following sections:

1. Cover Page
2. Copy of Chain-of-Custody
3. General Narrative
4. Quality Control Report
5. Analytical Results

Unless otherwise instructed by you, samples will be disposed of four weeks from the date of this letter.

Thank you for choosing MBT Environmental Laboratories. We are looking forward to serving you in the future. Should you have any questions concerning this analytical report or the analytical methods employed, please do not hesitate to call.

Sincerely,

Cheryl Matterson for:

Shakoora Azimi
Laboratory Director, Principal Scientist

ANALYTICAL REPORT
LABORATORY PROJECT (LP) NUMBER 11435

LYNDEN FARMS

The analyses performed by MBT Environmental Laboratories in this report comply with the requirements under the following certification/approval:

ARIZONA: Hazardous Waste, #AZ0468
 Waste Water, # AZ0468
 Drinking Water, #AZ0468

✓ CALIFORNIA: Hazardous Waste, #1417
 Waste Water, # 1417
 Drinking Water, #1417

CONNECTICUT: Waste Water, #PH0799

FLORIDA: Environmental Water,
 #E87298

KANSAS: Hazardous Waste, #E-1167
 Waste Water, #E-192
 Drinking Water, #E-192

NEW
HAMPSHIRE: Waste Water, #253193-A

NEW JERSEY: Waste Water, #44818

NEW YORK: Hazardous Waste, #11241
 Waste Water, #11241
 CLP, #11241

OKLAHOMA: Hazardous Waste, #9318
 Waste Water, #9318

TENNESSEE: Underground Storage Tank

UTAH: Hazardous Waste, #E-165
 Waste Water, #E-165
 Drinking Water, #E-165

WASHINGTON: Hazardous Waste, #C048

WISCONSIN: Hazardous Waste, #999940920
 Waste Water, #999940920

USACOE: Hazardous Waste
 Waste Water

AFCOE

(CN11435)

MBT Environmental
Laboratories





Environmental Laboratories, Inc.
3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

CHAIN OF CUSTODY RECORD 12625

SIDE 2 FOR
COMPLETE
INSTRUCTIONS

Project Name: Lynden Farms
Project Number: 2815.011
Project Location: (State) Portland, OR

FOR LABORATORY USE ONLY

Laboratory Project #: 11/1/95 Storage ID: 11-36
Sample Condition Upon Receipt: Temp: 17.1°C Gelger: _____
Custody Seals Present? Yes/No Intact? Yes/No Samples Intact? Yes/No
11/1/95 11:30 AM

Sample Disposal
(check one)

☒ Laboratory Standard
☐ Other _____

Level of QC
(see Side 2)

☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6A ☐ 6B
☐ 6C ☐ 6D ☐ 6E ☐ 6F ☐ 7 ☐ 8 ☐ A

Write in
Analysis Method

ANALYSES REQUESTED

SAMPLE INFORMATION

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description		Container(s)		Matrix Type	Pres. Type	TAT												
				Locator	Depth	#	Type															
1	11/1/95-101	B2-1	3-21	945	5.5	1	402	SOIL	102	12 hr	X	X										
2	102	B2-2		950	7.5	1					X	X										
3	103	B2-3		1005	15	1					X	X										
4	104	B3-1		1025	5.5	1					X	X										
5	105	B3-2		1035	7.5	1					X	X										
6	106	B3-3		1045	15	1					X	X										
7																						
8																						
9																						
10																						

SEND REPORT TO:

Company Name: EIES
Client Name: Louise Hauke
Address: 1784 Picasso #A
DAVIS CA 95616
Phone: 756 5912 Fax: 756 9207

BILL TO (if different):

Company Name: General Atomics
Address: SAN DIEGO CA
PO #: _____
Phone: _____ Fax: _____

Special Instructions/Comments

B2-1, B3-1: MODERATE PETROL. ODDR
B2-2, B3-2: SLIGHT PETROL. ODDR
Reports due: Tues, 3-28

Sampler Name: Louise M. Hauke

Relinquished By: [Signature]

Relinquished By: FED EX

Relinquished By: _____

Signature

Date/Time: 3-22-95 11:30

Date/Time: 3-23-95 11:00

Date/Time: _____

PPB Worn in Field

LEVEL D

Received By or Method of Shipment/shipment I.D.

Received By or Method of Shipment/shipment I.D.

Received By or Method of Shipment/shipment I.D.

Date/Time

Date/Time

Date/Time

Common Analytical Methods

413.1
413.2 Long Method
413.2 Short Method
418.1 Long Method
418.1 Short Method
420.1
502.2
503E
503.1
524.2
601
602
604
608
610
624
625
6010
6015
6015 Mod.
6020
6021
6040
6060
6100
6150
6240
6270
6310
Acidity
Alkalinity
BTEX
Chloride
CLP (see Side 2)
COD
Color
Conductivity
Comoxivity
Cyanide
Flashpoint
Fluoride
General Mineral
Hex. Chromium
Ion Balance
Metals (write specific
metal & method #)
Metals 6010*
Metals PP*
Metals Title 22:
TTLIC Level
STLC Level
(see Side 2)
Nitrate
Nitrite
Odor
Org. Lead
Org. Mercury
Percent Moisture
Percent Solid
Perchlorate
pH
Phosphates
Phosphorus
Sulfate
Sulfides
TCLP:
VOA
Semivolatile
Metals
Pesticide
TDS
Total Hardness
Total Solids
TPH/O
TPH/G
TSS
Turbidity
* Specify Total or Dissolved

GENERAL NARRATIVE

Comments:

Test methods may include minor modifications of published EPA methods (e.g., reporting limits or parameter lists). Reporting limits are adjusted to reflect dilution of the sample when appropriate. Solids and waste are analyzed with no correction made for moisture content.

Modified EPA 8015

The gasoline standard was obtained from a local BP station. Gasoline is sold commercially as unleaded gasoline.

The diesel standard was obtained from a local Chevron station. Diesel is sold commercially as Diesel Fuel #2.

The motor oil standard was obtained from a local automotive store. Manufacturer and motor oil type are Pennzoil SAE 10W-40.

The ending calibrations for Samples 11435-7, -8, -9, -10, -11, and -12 did not meet the criteria established at MBT Environmental Laboratories. The samples were not reanalyzed since the beginning calibrations met criteria.

Abbreviations and Definitions:

MB	<i>Method Blank</i> - An aliquot of a blank matrix carried throughout the entire analytical process
LCS	<i>Laboratory Control Sample</i> - A blank to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the accuracy of the method
MS/MSD	<i>Matrix Spike/Matrix Spike Duplicate</i> - Duplicate samples to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the extent of matrix bias or interference on analyte recovery
RPD	<i>Relative Percent Difference</i> - The measurement of precision between duplicate analyses
BRL	<i>Below Reporting Limit</i>
NS	<i>Not Specified</i>
NA	<i>Not Applicable</i>

(CN11435)

MBT Environmental
Laboratories



QUALITY CONTROL REPORT

Quality Control Summary

Method: Modified EPA 8015

CRITERIA	Analytical Section Review		10% QA/QC Validation	
	YES	NO	YES	NO
All samples met holding time.	✓		✓	
All surrogate recoveries met QC acceptance criteria.	NA		NA	
Laboratory Control sample recoveries met QC acceptance criteria.	✓		✓	
Matrix spike recoveries met advisory QC acceptance criteria.	NA		NA	
Method blanks met QC acceptance criteria.	✓		✓	
Initial calibration met QC acceptance criteria.	✓		✓	
Continuing calibration met QC acceptance criteria.		✓		✓
Internal standards met QC acceptance criteria.	NA		NA	
Tuning and mass calibrations met QC acceptance criteria.	NA		NA	

Note: For any criteria listed above which are not met, please refer to the sample data sheet, QC data sheet, or General Narrative for applicable comments.

Analytical Section Review:

QA/QC Validation:

Arlene Putnam

Dan Mehring

MBT Environmental
Laboratories



(CN11435)

QUALITY CONTROL REPORT

METHOD BLANK

Method: Mod. EPA 8015
Units: mg/Kg (ppm)

Date Analyzed: 03/24/95
Date Extracted: 03/23/95
Batch Number: 950323-5201

<u>Petroleum Fraction</u>	<u>Carbon Range</u>	<u>Reporting Limit</u>	<u>Concentration</u>
Gasoline Range	C7 - C14	10	BRL
Diesel Range	C12 - C22	10	BRL
Motor Oil Range	C22 - C32	10	BRL

(CN11435)

MBT Environmental
Laboratories



QUALITY CONTROL REPORT

Laboratory Control Sample Method 8015 - Modified

LP#: 11435

Batch #: 950323-5201

Date Of Analysis: 03/24/95

Spike Sample ID: LCSS 102

Column: XII-5

Spike ID Code: W5-293

Instrument #: PGC

Surrogate ID Code: NA

Matrix: Soil Units: mg/Kg

COMPOUNDS	(a)	(b)	(c)	(d)	(e)	(f)	(g)	ACCEPTANCE LIMITS	
	SAMPLE CONC.	SPIKE CONC.	SAMPLE + SPIKE CONC.	SPIKE REC. %	SAMPLE DUP. + SPIKE CONC.	SPIKE DUP. REC. %	RPD %	% REC.	RPD
Diesel	0	41.7	29.9	72	NA	NA	NA	52 - 125	≤ 25

$$\text{Spike Recovery} = d = ((c-a)/b) \times 100$$

$$\text{Spike Duplicate Recovery} = f = ((e-a)/b) \times 100$$

$$\text{Relative Percent Difference} = g = (|c-e|)/((c+e) \times .5) \times 100$$



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: Lynden Farms

Project
Number: 2815011

Sample
Description: 5.5

Lab Project-
ID Number: 11435-1

Sample
Number: B2-1

Date
Sampled: 03/21/95

Date
Received: 03/23/95

Date
Extracted: 03/23/95

Date
Analyzed: 03/24/95

Batch
Number: 950323-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	16	10
Motor Oil Range	C22 - C32	26	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

The sample was diluted 10 fold to bring target analytes within linear working range.

The standard EPA 8015 Modified low reporting limit of 1 ppm was multiplied by the dilution factor to obtain the reporting limit. If the reporting limit was below the standard reporting limit of 10 ppm, 10 ppm was used.



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Lab Project-
ID Number: 11435-1

Comments

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: 

Date: 3/29/95

025

Page 2

MBT Environmental
Laboratories



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TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: Lynden Farms

Project
Number: 2815011

Sample
Description: 7.5

Lab Project-
ID Number: 11435-2

Sample
Number: B2-2

Date
Sampled: 03/21/95

Date
Received: 03/23/95

Date
Extracted: 03/23/95

Date
Analyzed: 03/24/95

Batch
Number: 950323-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	BRL	10
Motor Oil Range	C22 - C32	BRL	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: _____ Date: _____



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: *2815011*

Sample
Description: *15*

Lab Project-
ID Number: *11435-3*

Sample
Number: *B2-3*

Date
Sampled: *03/21/95*

Date
Received: *03/23/95*

Date
Extracted: *03/23/95*

Date
Analyzed: *03/24/95*

Batch
Number: *950323-5201*

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	BRL	10
Motor Oil Range	C22 - C32	BRL	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: *Louise Hauke*

Company: *E & ES*

Address: *1784 Picasso #A, Davis, CA 95616*

Matrix: *Soil*

Approved by: *[Signature]*

Date: *3/29/95*



Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: Lynden Farms

Project
Number: 2815011

Sample
Description: 15

Lab Project-
ID Number: 11435-6

Sample
Number: B3-3

Date
Sampled: 03/21/95

Date
Received: 03/23/95

Date
Extracted: 03/23/95

Date
Analyzed: 03/27/95

Batch
Number: 950323-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	15	10
Motor Oil Range	C22 - C32	22	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

The sample was diluted 5 fold to bring target analytes within linear working range.

The standard EPA 8015 Modified low reporting limit of 1 ppm was multiplied by the dilution factor to obtain the reporting limit. If the reporting limit was below the standard reporting limit of 10 ppm, 10 ppm was used.



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Lab Project-
ID Number: 11435-6

Comments

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: 

Date: 3/29/95

025

Page 2

MBT Environmental
Laboratories



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TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project Name: Lynden Farms

Project Number: 2815011

Sample Description: 1

Lab Project-ID Number: 11435-7

Sample Number: B4-1

Date Sampled: 03/21/95

Date Received: 03/23/95

Date Extracted: 03/23/95

Date Analyzed: 03/24/95

Batch Number: 950323-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Motor Oil Range	C22 - C32	11	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

The sample was diluted 5 fold to bring target analytes within linear working range.

The standard EPA 8015 Modified low reporting limit of 1 ppm was multiplied by the dilution factor to obtain the reporting limit. If the reporting limit was below the standard reporting limit of 10 ppm, 10 ppm was used.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: 

Date: 3/29/95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: Lynden Farms

Project
Number: 2815011

Sample
Description: 2.5

Lab Project-
ID Number: 11435-8

Sample
Number: B4-2

Date
Sampled: 03/21/95

Date
Received: 03/23/95

Date
Extracted: 03/23/95

Date
Analyzed: 03/24/95

Batch
Number: 950323-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Motor Oil Range	C22 - C32	27	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

The sample was diluted 5 fold to bring target analytes within linear working range.

The standard EPA 8015 Modified low reporting limit of 1 ppm was multiplied by the dilution factor to obtain the reporting limit. If the reporting limit was below the standard reporting limit of 10 ppm, 10 ppm was used.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: 

Date: 3/29/95



Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: Lynden Farms

Project
Number: 2815011

Sample
Description: 2.5

Lab Project-
ID Number: 11435-10

Sample
Number: B5-2

Date
Sampled: 03/21/95

Date
Received: 03/23/95

Date
Extracted: 03/23/95

Date
Analyzed: 03/24/95

Batch
Number: 950323-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Motor Oil Range	C22 - C32	20	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

The sample was diluted 5 fold to bring target analytes within linear working range.

The standard EPA 8015 Modified low reporting limit of 1 ppm was multiplied by the dilution factor to obtain the reporting limit. If the reporting limit was below the standard reporting limit of 10 ppm, 10 ppm was used.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by:

Date: 3/29/95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project Name: *Lynden Farms*

Project Number: *2815011*

Sample Description: *2*

Lab Project-ID Number: *11435-11*

Sample Number: *B6-1*

Date Sampled: *03/21/95*

Date Received: *03/23/95*

Date Extracted: *03/23/95*

Date Analyzed: *03/24/95*

Batch Number: *950323-5201*

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Motor Oil Range	C22 - C32	19	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

The sample was diluted 5 fold to bring target analytes within linear working range.

The standard EPA 8015 Modified low reporting limit of 1 ppm was multiplied by the dilution factor to obtain the reporting limit. If the reporting limit was below the standard reporting limit of 10 ppm, 10 ppm was used.

Contact: *Louise Hauke*

Company: *E & ES*

Address: *1784 Picasso #A, Davis, CA 95616*

Matrix: *Soil*

Approved by: *[Signature]*

Date: *3/29/95*



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: *2815011*

Sample
Description: *4*

Lab Project-
ID Number: *11435-12*

Sample
Number: *B6-2*

Date
Sampled: *03/21/95*

Date
Received: *03/23/95*

Date
Extracted: *03/23/95*

Date
Analyzed: *03/24/95*

Batch
Number: *950323-5201*

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Motor Oil Range	C22 - C32	BRL	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: *Louise Hauke*

Company: *E & ES*

Address: *1784 Picasso #A, Davis, CA 95616*

Matrix: *Soil*

Approved by: 

Date: *3/29/95*



MBT Environmental
Laboratories

3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292



Date: March 29, 1995
LP #: 11445

Louise Hauke
E&ES
1784 Picasso #A
Davis, CA 95616

Dear Ms. Hauke:

Enclosed are the laboratory results for the 17 samples submitted to MBT Environmental Laboratories on March 24, 1995, for the project *Lynden Farms*.

The analysis requested is:

Modified EPA 8015 (17 - Soil)

The report consists of the following sections:

1. Cover Page
2. Copy of Chain-of-Custody
3. General Narrative
4. Quality Control Report
5. Analytical Results

Unless otherwise instructed by you, samples will be disposed of four weeks from the date of this letter.

Thank you for choosing MBT Environmental Laboratories. We are looking forward to serving you in the future. Should you have any questions concerning this analytical report or the analytical methods employed, please do not hesitate to call.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Shakoor Azimi'.

Shakoor Azimi
Laboratory Director, Principal Scientist

ANALYTICAL REPORT
LABORATORY PROJECT (LP) NUMBER 11445

LYNDEN FARMS

The analyses performed by MBT Environmental Laboratories in this report comply with the requirements under the following certification/approval:

ARIZONA: Hazardous Waste, #AZ0468
 Waste Water, # AZ0468
 Drinking Water, #AZ0468

✓ CALIFORNIA: Hazardous Waste, #1417
 Waste Water, # 1417
 Drinking Water, #1417

CONNECTICUT: Waste Water, #PH0799

FLORIDA: Environmental Water,
 #E87298

KANSAS: Hazardous Waste, #E-1167
 Waste Water, #E-192
 Drinking Water, #E-192

NEW HAMPSHIRE: Waste Water, #253193-A

NEW JERSEY: Waste Water, #44818

NEW YORK: Hazardous Waste, #11241
 Waste Water, #11241
 CLP, #11241

OKLAHOMA: Hazardous Waste, #9318
 Waste Water, #9318

TENNESSEE: Underground Storage Tank

UTAH: Hazardous Waste, #E-165
 Waste Water, #E-165
 Drinking Water, #E-165

WASHINGTON: Hazardous Waste, #C048

WISCONSIN: Hazardous Waste, #999940920
 Waste Water, #999940920

USACOE: Hazardous Waste
 Waste Water

AFCEE

(CN11445)

MBT Environmental
Laboratories





M Environmental 3083 Gold Canal Drive
 La. stories.. Rancho Cordova
 CA 95670
 Phone 916/852-6600
 Fax 916/852-7292

page 2/2
CHAIN OF CUSTODY RECORD 12626

**SIDE 2 FOR
 COMPLETE
 INSTRUCTIONS**

Project Name: Lynden Farms
 Project Number: 2815-011
 Project Location: (State) OR

FOR LABORATORY USE ONLY

Laboratory Project #: 11445 Storage ID: 1931
 Sample Condition Upon Receipt: Temp: 21 °C Gelger: 21
 Custody Seals Present? Yes/No Intact? Yes/No Samples Intact? Yes/No

Sample Disposal
 (check one)

☒ Laboratory Standard
☐ Other _____

Level of QC
 (see Side 2)

☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6A ☐ 6B
☐ 6C ☐ 6D ☐ 6E ☐ 6F ☐ 7 ☐ 8 ☐ A

Write in →
 Analysis Method

SAMPLE INFORMATION

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description		Container(s)		Matrix Type	Pres. Type	TAT	ANALYSES REQUESTED									
				Locator	Depth	#	Type													
1	11445-011	B11-3	3-22	1520	15.5	1	40Z	501L	ICE		X									
2	012	B12-1		1530	5	1					X									
3	013	B12-2		1545	7	1					X									
4	014	B12-3		1555	15	1					X									
5	015	H2-1	3-23	905	1.25	1					X									
6	016	H2-3 H3-1		920	1.25	1					X									
7	017	H2-4 H4-1		1045	0.75	1					X									
8																				
9																				
10																				

SEND REPORT TO:

Company Name: E+ES
 Client Name: 1784 DASSO BA
 Address: DAVIS CA 95616
 Phone: 756 5912 Fax: 756 9207

BILL TO (if different):

Company Name: General Atomic
 Address: SAN DIEGO
 PO #: 619 455 3000 Fax:

Special Instructions/Comments

Samples B11 + B12 have
petroleum odors.
Report due Tues. or Weds. AM.
(3-28, 3-29) sample IDs for
016 + 017 corrected per L1150
ALL REPORT 3/29/95

Sampler Name: LOUISE M. Hauke

Signature

PPE Worn in Field

Level D

Relinquished By: EL

Date/Time

3-23-95 13:15

Received By or Method of Shipment/Shipment ID.

FODEX

3-23-95 13:15

Relinquished By: EL

Date/Time

3-21-95 9:56

Received By or Method of Shipment/Shipment ID.

FODEX

3-21-95 9:56

Relinquished By: EL

Date/Time

Received By or Method of Shipment/Shipment ID.

3-21-95 9:56

**Common
 Analytical Methods**

413.1
 413.2 Long Method
 413.2 Short Method
 418.1 Long Method
 418.1 Short Method
 420.1
 502.2
 503E
 503.1
 524.2
 601
 602
 604
 606
 610
 624
 626
 6010
 6015
 6015 Mod.
 6020
 6021
 6040
 6080
 6100
 6150
 6240
 6270
 6310
 Acidity
 Alkalinity
 BTEX
 Chloride
 CLP (see Side 2)
 COD
 Color
 Conductivity
 Corrosivity
 Cyanide
 Flashpoint
 Fluoride
 General Mineral
 Hex. Chromium
 Ion Balance
 Metals (write specific
 metal & method #)
 Metals 6010
 Metals PP
 Metals Title 22:
 TLIC Level
 STIC Level
 (see Side 2)
 Nitrate
 Nitrite
 Odor
 Org. Lead
 Org. Mercury
 Percent Moisture
 Percent Solid
 Perchlorate
 pH
 Phosphates
 Phosphorus
 Sulfate
 Sulfides
 TCLP:
 VOA
 Semivolatile
 Metals
 Pesticide
 TDS
 Total Hardness
 Total Solids
 TPH/D
 TPH/G
 TSS
 Turbidity

* Specify Total or Dissolved



M. Environmental
Laboratories
3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

page 1/2
CHAIN OF CUSTODY RECORD 12688

SEE SIDE 2 FOR
COMPLETE
INSTRUCTIONS

Project Name: Lynden Farms
Project Number: 2815.011
Project Location: (State) OR

FOR LABORATORY USE ONLY
Laboratory Project #: 11445 Storage ID: 1931
Sample Condition Upon Receipt: Temp: 5 °C Gelger: 1
Custody Seals Present? Yes/No Intact? Yes/No Samples Intact? Yes/No 1

Sample Disposal
(check one)

☒ Laboratory Standard
☐ Other

Level of QC (see Side 2) ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6A ☐ 6B
☐ 6C ☐ 6D ☐ 6E ☐ 6F ☐ 7 ☐ 8 ☐ A

Write in
Analysis Method

ANALYSES REQUESTED

SAMPLE INFORMATION

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description		Container(s)		Matrix Type	Pres. Type	TAT	ANALYSES REQUESTED									
				Locator	Depth	#	Type													
1 <u>11445-001</u>	<u>H1-1</u>	<u>3-22</u>	<u>1150</u>		<u>2</u>	<u>1</u>	<u>40Z</u>	<u>SDIL</u>	<u>ICE</u>		<u>X</u>									
2 <u>002</u>	<u>B7-1</u>		<u>1335</u>		<u>2</u>	<u>1</u>					<u>X</u>									
3 <u>003</u>	<u>B7-2</u>		<u>1340</u>		<u>4</u>	<u>1</u>					<u>X</u>									
4 <u>004</u>	<u>B9-1</u>		<u>1420</u>		<u>1</u>	<u>1</u>					<u>X</u>									
5 <u>005</u>	<u>B9-2</u>		<u>1420</u>		<u>2.5</u>	<u>1</u>					<u>X</u>									
6 <u>006</u>	<u>B10-1</u>		<u>1440</u>		<u>5</u>	<u>1</u>					<u>X</u>									
7 <u>007</u>	<u>B10-2</u>		<u>1445</u>		<u>7.5</u>	<u>1</u>					<u>X</u>									
8 <u>008</u>	<u>B10-3</u>		<u>1455</u>		<u>15</u>	<u>1</u>					<u>X</u>									
9 <u>009</u>	<u>B11-1</u>		<u>1505</u>		<u>5</u>	<u>1</u>					<u>X</u>									
10 <u>010</u>	<u>B11-2</u>	<u>✓</u>	<u>1510</u>		<u>7</u>	<u>1</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>		<u>X</u>									

SEND REPORT TO:
Company Name ETES
Client Name
Address 1784 PICASSO #A
DAVIS CA 95616
Phone 756-5912 Fax 756-9201

BILL TO (if different):
Company Name General Atomics
Address SAN DIEGO
PO #
Phone 6194553000 Fax

Special Instructions/Comments
Reports due TUES 3/28
Petroleum odors in samples
B10 + B11

Sampler Name
LOUISE M. HAUKE

Relinquished By: [Signature] Date/Time 3-23-95 13:15

Relinquished By: FLD EX Date/Time 3-24-95 9:00

Relinquished By: Date/Time

PPE Worn in Field Level D

Received By or Method of Shipment/Shipments I.D. Fedex Date/Time 3-23-95 13:15

Received By or Method of Shipment/Shipments I.D. [Signature] Date/Time 3-24-95 9:30

Received By or Method of Shipment/Shipments I.D. Date/Time

Common
Analytical Methods

413.1
413.2 Long Method
413.2 Short Method
418.1 Long Method
418.1 Short Method

420.1
502.2
503E
503.1
524.2

601
602
604
608
610
624
625

8010
8015
8015 Mod.

8020
8021
8040
8080

8100
8150
8240
8270
8310

Acidity
Alkalinity
BTEX
Chloride
CLP (see Side 2)

COO
Color
Conductivity
Corrosivity

Cyanide
Flashpoint
Fluoride
General Mineral

Hex. Chromium
Ion Balance
Metals (write specific
metal & method #)

Metals 6010
Metals PP
Metals Title 22:
TLC Level
STLC Level
(see Side 2)

Nitrate
Nitrite
Odor
Org. Lead

Org. Mercury
Percent Moisture
Percent Solid
Perchlorate

pH
Phosphates
Phosphorus
Sulfide
Sulfides

TCLP:
VOA
Semivolatile
Metals
Pesticides

TDS
Total Hardness
Total Solids
TPH/D
TPH/G

TSS
Turbidity

* Sample Total or Blank

GENERAL NARRATIVE

Comments:

Test methods may include minor modifications of published EPA methods (e.g., reporting limits or parameter lists). Reporting limits are adjusted to reflect dilution of the sample when appropriate. Solids and waste are analyzed with no correction made for moisture content.

Modified EPA 8015

The gasoline standard was obtained from a local BP station. Gasoline is sold commercially as unleaded gasoline.

The diesel standard was obtained from a local Chevron station. Diesel is sold commercially as Diesel Fuel #2.

The motor oil standard was obtained from a local automotive store. Manufacturer and motor oil type are Pennzoil SAE 10W-40.

The ending calibrations for sample 11445-17 did not meet the criteria established at MBT Environmental Laboratories. The sample was not reanalyzed since the beginning calibration met criteria.

Abbreviations and Definitions:

MB	<i>Method Blank</i> - An aliquot of a blank matrix carried throughout the entire analytical process
LCS	<i>Laboratory Control Sample</i> - A blank to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the accuracy of the method
MS/MSD	<i>Matrix Spike/Matrix Spike Duplicate</i> - Duplicate samples to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the extent of matrix bias or interference on analyte recovery
RPD	<i>Relative Percent Difference</i> - The measurement of precision between duplicate analyses
BRL	<i>Below Reporting Limit</i>
NS	<i>Not Specified</i>
NA	<i>Not Applicable</i>

(CN11445)



QUALITY CONTROL REPORT

Quality Control Summary

Method: Modified EPA 8015

CRITERIA	Analytical Section Review		10% QA/QC Validation	
	YES	NO	YES	NO
All samples met holding time.	✓		✓	
All surrogate recoveries met QC acceptance criteria.	NA		NA	
Laboratory Control sample recoveries met QC acceptance criteria.	✓		✓	
Matrix spike recoveries met advisory QC acceptance criteria.		✓		✓
Method blanks met QC acceptance criteria.	✓		✓	
Initial calibration met QC acceptance criteria.	✓		✓	
Continuing calibration met QC acceptance criteria.		✓		✓
Internal standards met QC acceptance criteria.	NA		NA	
Tuning and mass calibrations met QC acceptance criteria.	NA		NA	

Note: For any criteria listed above which are not met, please refer to the sample data sheet, QC data sheet, or General Narrative for applicable comments.

Analytical Section Review:

QA/QC Validation:

Arlene Putnam

Dan Mehring

MBT Environmental
Laboratories



(CN11445)

QUALITY CONTROL REPORT

METHOD BLANK

Method: Mod. EPA 8015
Units: mg/Kg (ppm)

Date Analyzed: 03/26/95
Date Extracted: 03/24/95
Batch Number: 950324-5201

<u>Petroleum Fraction</u>	<u>Carbon Range</u>	<u>Reporting Limit</u>	<u>Concentration</u>
Gasoline Range	C7 - C14	10	BRL
Diesel Range	C12 - C22	10	BRL
Motor Oil Range	C22 - C32	10	BRL

MBT Environmental
Laboratories



(CN11445)

QUALITY CONTROL REPORT

Laboratory Control Sample Method 8015 - Modified

LP#: 11445 Batch #: 950324-5201
 Date Of Analysis: 03/26/95 Spike Sample ID: LCSS 103
 Column: XTI-5 Spike ID Code: W5-293
 Instrument #: PGC6 Surrogate ID Code: NA
 Matrix: Soil Units: mg/Kg

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	ACCEPTANCE LIMITS	
COMPOUNDS	SAMPLE CONC.	SPIKE CONC.	SAMPLE + SPIKE CONC.	SPIKE REC. %	SAMPLE DUP. + SPIKE CONC.	SPIKE DUP. REC. %	RPD %	% REC.	RPD
Diesel	0	83.3	68.3	82	NA	NA	NA	52 - 125	≤ 25

Spike Recovery - d = ((c-a)/b) x 100
 Spike Duplicate Recovery - f = ((e-a)/b) x 100
 Relative Percent Difference - g = (|c-e|)/((c+e) x .5) x 100



QUALITY CONTROL REPORT

Matrix Spike/Matrix Spike Duplicate Method 8015 - Modified

LP#: 11445

Batch #: 950324-5201

Date Of Analysis: 03/27/95

Spike Sample ID: 11445-1 MSS/MSDS

Column: XTI-5

Spike ID Code: W5-293

Instrument #: PGC6

Surrogate ID Code: NA

Matrix: Soil Units: mg/Kg

COMPOUNDS	(a)	(b)	(c)	(d)	(e)	(f)	(g)	ACCEPTANCE LIMITS	
	SAMPLE CONC.	SPIKE CONC.	SAMPLE + SPIKE CONC.	SPIKE REC. %	SAMPLE DUP. + SPIKE CONC.	SPIKE DUP. REC. %	RPD %	% REC.	RPD
Diesel	67.7	83.3	95.0	33 ^a	89.7	26 ^a	6	52 - 125	≤ 25

$$\text{Spike Recovery} = d = ((c-a)/b) \times 100$$

$$\text{Spike Duplicate Recovery} = f = ((e-a)/b) \times 100$$

$$\text{Relative Percent Difference} = g = (|c-e|)/((c+e) \times .5) \times 100$$

^a Matrix spike and matrix spike duplicate recoveries are beyond advisory acceptance limits; however, the laboratory control sample data are acceptable.



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: 2815011

Sample
Description: 2

Lab Project-
ID Number: 11445-1

Sample
Number: H1-1

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/27/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	50
Diesel Range	C12 - C22	{c} 68	50
Motor Oil Range	C22 - C32	BRL	50

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

{c} The chromatographic pattern of diesel in the sample does not exactly match the standard chromatograph.

The sample was diluted 5 fold to bring target analytes within linear working range.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: *UM*

Date: 3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: Lynden Farms

Project
Number: 2815011

Sample
Description: 2

Lab Project-
ID Number: 11445-2

Sample
Number: B7-1

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	100	10
Motor Oil Range	C22 - C32	BRL	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: _____

em

Date: 3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: Lynden Farms

Project
Number: 2815011

Sample
Description: 4

Lab Project-
ID Number: 11445-3

Sample
Number: B7-2

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	{c} 16	10
Motor Oil Range	C22 - C32	12	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

{c} The chromatographic pattern of diesel in the sample does not exactly match the standard chromatograph.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: UM Date: 3.29.95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: *2815011*

Sample
Description: *1*

Lab Project-
ID Number: *11445-4*

Sample
Number: *B9-1*

Date
Sampled: *03/22/95*

Date
Received: *03/24/95*

Date
Extracted: *03/24/95*

Date
Analyzed: *03/27/95*

Batch
Number: *950324-5201*

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	BRL	10
Motor Oil Range	C22 - C32	17	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: *Louise Hauke*

Company: *E & ES*

Address: *1784 Picasso #A, Davis, CA 95616*

Matrix: *Soil*

Approved by: _____

UM

Date: *3-29-95*



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: *2815011*

Sample
Description: *2.5*

Lab Project-
ID Number: *11445-5*

Sample
Number: *B9-2*

Date
Sampled: *03/22/95*

Date
Received: *03/24/95*

Date
Extracted: *03/24/95*

Date
Analyzed: *03/27/95*

Batch
Number: *950324-5201*

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	12	10
Motor Oil Range	C22 - C32	28	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: *Louise Hauke*

Company: *E & ES*

Address: *1784 Picasso #A, Davis, CA 95616*

Matrix: *Soil*

Approved by: *UM*

Date: *3-29-95*



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: Lynden Farms

Project
Number: 2815011

Sample
Description: 5

Lab Project-
ID Number: 11445-6

Sample
Number: B10-1

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	{c} 14	10
Motor Oil Range	C22 - C32	120	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

{c} The chromatographic pattern of diesel in the sample does not exactly match the standard chromatograph.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: CM Date: 3.29.95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: 2815011

Sample
Description: 7.5

Lab Project-
ID Number: 11445-7

Sample
Number: B10-2

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	{c} 12	10
Motor Oil Range	C22 - C32	86	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

{c} The chromatographic pattern of diesel in the sample does not exactly match the standard chromatograph.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: *UM* Date: 3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: 2815011

Sample
Description: 15

Lab Project-
ID Number: 11445-8

Sample
Number: B10-3

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	BRL	10
Motor Oil Range	C22 - C32	19	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: _____

UM

Date: _____

3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: 2815011

Sample
Description: 5'

Lab Project-
ID Number: 11445-9

Sample
Number: B11-1

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	{c} 10	10
Motor Oil Range	C22 - C32	84	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

{c} The chromatographic pattern of diesel in the sample does not exactly match the standard chromatograph.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: _____

UM

Date: 3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project Name: Lynden Farms

Project Number: 2815011

Sample Description: 7'

Lab Project-ID Number: 11445-10

Sample Number: B11-2

Date Sampled: 03/22/95

Date Received: 03/24/95

Date Extracted: 03/24/95

Date Analyzed: 03/26/95

Batch Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	{c} 10	10
Motor Oil Range	C22 - C32	96	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

{c} The chromatographic pattern of diesel in the sample does not exactly match the standard chromatograph.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: UM Date: 3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: 2815011

Sample
Description: 15.5

Lab Project-
ID Number: 11445-11

Sample
Number: B11-3

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	BRL	10
Motor Oil Range	C22 - C32	BRL	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: *UM* Date: 3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}

Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: 2815011

Sample
Description: 5

Lab Project-
ID Number: 11445-12

Sample
Number: B12-1

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	BRL	10
Motor Oil Range	C22 - C32	21	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: *LM* Date: 3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: 2815011

Sample
Description: 7

Lab Project-
ID Number: 11445-13

Sample
Number: B12-2

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	{c} 10	10
Motor Oil Range	C22 - C32	97	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

{c} The chromatographic pattern of diesel in the sample does not exactly match the standard chromatograph.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: CM Date: 3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}

Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: 2815011

Sample
Description: 15

Lab Project-
ID Number: 11445-14

Sample
Number: B12-3

Date
Sampled: 03/22/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	BRL	10
Motor Oil Range	C22 - C32	BRL	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: *LM* Date: 3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: Lynden Farms

Project
Number: 2815011

Sample
Description: 1.25

Lab Project-
ID Number: 11445-15

Sample
Number: H2-1

Date
Sampled: 03/23/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/26/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	BRL	10
Motor Oil Range	C22 - C32	BRL	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: _____

LM

Date: _____

3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: 2815011

Sample
Description: 1.25

Lab Project-
ID Number: 11445-16

Sample
Number: H3-1

Date
Sampled: 03/23/95

Date
Received: 03/24/95

Date
Extracted: 03/24/95

Date
Analyzed: 03/27/95

Batch
Number: 950324-5201

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	50
Diesel Range	C12 - C22	BRL	50
Motor Oil Range	C22 - C32	120	50

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

The sample was diluted 5 fold to bring target analytes within linear working range.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: *CM* Date: 3-29-95



TOTAL PETROLEUM HYDROCARBONS

Analytical Method: Modified EPA 8015 {a}
Preparation Method: Modified EPA 3550 {b}

Project
Name: *Lynden Farms*

Project
Number: *2815011*

Sample
Description: *0.75*

Lab Project-
ID Number: *11445-17*

Sample
Number: *H4-1*

Date
Sampled: *03/23/95*

Date
Received: *03/24/95*

Date
Extracted: *03/24/95*

Date
Analyzed: *03/26/95*

Batch
Number: *950324-5201*

Petroleum Fraction	Carbon Range	Concentration mg/Kg (ppm)	Reporting Limit mg/Kg (ppm)
Gasoline Range	C7 - C14	BRL	10
Diesel Range	C12 - C22	BRL	10
Motor Oil Range	C22 - C32	28	10

Comments

The cover letter and enclosures are integral parts of this report.

{a} Derived from EPA 8015. Gas Chromatograph with flame ionization detector is used to perform the analysis. Modification is due to the quantitation of petroleum fraction instead of non-halogenated volatile compounds.

{b} Shaker is used instead of sonicator for extraction.

Contact: Louise Hauke

Company: E & ES

Address: 1784 Picasso #A, Davis, CA 95616

Matrix: Soil

Approved by: *LM* Date: *3-29-95*





NATIONAL
ENVIRONMENTAL
TESTING, INC.

Portland Division
17400 SW Upper Boones Ferry Rd.
Suite #260
Portland, OR 97224
Tel: (503) 624-5449
Fax: (503) 639-6889

Louise Hauke
Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

Date: 03/27/1995
NET Account No.: 12105
NET Job Number: 95.00807

Project: 2815-011
Location: Lynden Farms

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Sample Number	Sample Description	Matrix Type	Date Taken	Date Received
37572	B8-1	SOIL	03/22/1995	03/23/1995
37573	B8-2	SOIL	03/22/1995	03/23/1995
37574	B13-1	SOIL	03/22/1995	03/23/1995
37575	B13-2	SOIL	03/22/1995	03/23/1995
37576	B13-3	SOIL	03/22/1995	03/23/1995
37577	B13-4	SOIL	03/22/1995	03/23/1995
37578	B14-1	SOIL	03/22/1995	03/23/1995
37579	B14-2	SOIL	03/22/1995	03/23/1995
37580	B14-3	SOIL	03/22/1995	03/23/1995

Approved by:

Marty French
NET, INC. Division Manager



ANALYTICAL REPORT

Louise Hauke
Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

03/27/1995
Job No.: 95.00807
Page: 2

Project Name: 2815-011
Date Received: 03/23/1995

Sample Number Sample Description
37572 B8-1

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
OAR TPH-GAS (S)						
Dilution Factor		1	-		03/23/1995	
TPH-Gas	OAR-G	ND	10	mg/Kg	03/23/1995	

Sample Number Sample Description
37573 B8-2

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
OAR TPH-GAS (S)						
Dilution Factor		1	-		03/23/1995	
TPH-Gas	OAR-G	ND	10	mg/Kg	03/23/1995	

Sample Number Sample Description
37574 B13-1

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
OAR TPH-GAS (S)						
Dilution Factor		1	-		03/23/1995	
TPH-Gas	OAR-G	ND	10	mg/Kg	03/23/1995	

Sample Number Sample Description
37575 B13-2

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
OAR TPH-GAS (S)						
Dilution Factor		1	-		03/23/1995	
TPH-Gas	OAR-G	ND	10	mg/Kg	03/23/1995	

Sample Number Sample Description
37576 B13-3

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
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A sample result of ND indicates the parameter was Not Detected at the reporting limit.

ANALYTICAL REPORT

Louise Hauke
Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

03/27/1995
Job No.: 95.00807

Page: 3

Project Name: 2815-011
Date Received: 03/23/1995

Sample Number Sample Description
37576 B13-3

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
OAR TPH-GAS (S)						
Dilution Factor		1	-		03/23/1995	
TPH-Gas	OAR-G	ND	10	mg/Kg	03/23/1995	

Sample Number Sample Description
37577 B13-4

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
OAR TPH-GAS (S)						
Dilution Factor		1	-		03/23/1995	
TPH-Gas	OAR-G	ND	10	mg/Kg	03/23/1995	

Sample Number Sample Description
37578 B14-1

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
OAR TPH-GAS (S)						
Dilution Factor		1	-		03/23/1995	
TPH-Gas	OAR-G	ND	10	mg/Kg	03/23/1995	

Sample Number Sample Description
37579 B14-2

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
OAR TPH-GAS (S)						
Dilution Factor		1	-		03/23/1995	
TPH-Gas	OAR-G	ND	10	mg/Kg	03/23/1995	

Sample Number Sample Description
37580 B14-3

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

ANALYTICAL REPORT

Louise Hauke
Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

03/27/1995
Job No.: 95.00807

Page: 4

Project Name: 2815-011
Date Received: 03/23/1995

Sample Number Sample Description
37580 B14-3

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
OAR TPH-GAS (S)		1	-		03/23/1995	
Dilution Factor						
TPH-Gas	OAR-G	ND	10	mg/Kg	03/23/1995	

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

SURROGATE REPORT

Louise Hauke
Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

03/27/1995
Job No.: 95.00807

Page: 5

Project Name: 2815-011
Date Received: 03/23/1995

<u>SURROGATES</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
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Sample Number	Sample Description
37572	B8-1

aaa-Trifluorotoluene (Surr.)	OAR-G	62	†	03/23/1995
4-Bromofluorobenzene (Surr.)	OAR-G	110	†	03/23/1995

Sample Number	Sample Description
37573	B8-2

aaa-Trifluorotoluene (Surr.)	OAR-G	93	†	03/23/1995
4-Bromofluorobenzene (Surr.)	OAR-G	111	†	03/23/1995

Sample Number	Sample Description
37574	B13-1

aaa-Trifluorotoluene (Surr.)	OAR-G	94	†	03/23/1995
4-Bromofluorobenzene (Surr.)	OAR-G	75	†	03/23/1995

Sample Number	Sample Description
37575	B13-2

aaa-Trifluorotoluene (Surr.)	OAR-G	97	†	03/23/1995
4-Bromofluorobenzene (Surr.)	OAR-G	100	†	03/23/1995

Sample Number	Sample Description
37576	B13-3

aaa-Trifluorotoluene (Surr.)	OAR-G	86	†	03/23/1995
4-Bromofluorobenzene (Surr.)	OAR-G	99	†	03/23/1995

Sample Number	Sample Description
37577	B13-4

aaa-Trifluorotoluene (Surr.)	OAR-G	98	†	03/23/1995
4-Bromofluorobenzene (Surr.)	OAR-G	92	†	03/23/1995

SURROGATE REPORT

Louise Hauke
Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

03/27/1995
Job No.: 95.00807

Page: 6

Project Name: 2815-011
Date Received: 03/23/1995

<u>SURROGATES</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
Sample Number	Sample Description			
37578	B14-1			
aaa-Trifluorotoluene (Surr.)	OAR-G	90	†	03/23/1995
4-Bromofluorobenzene (Surr.)	OAR-G	94	†	03/23/1995
Sample Number	Sample Description			
37579	B14-2			
aaa-Trifluorotoluene (Surr.)	OAR-G	99	†	03/23/1995
4-Bromofluorobenzene (Surr.)	OAR-G	101	†	03/23/1995
Sample Number	Sample Description			
37580	B14-3			
aaa-Trifluorotoluene (Surr.)	OAR-G	102	†	03/23/1995
4-Bromofluorobenzene (Surr.)	OAR-G	106	†	03/23/1995

QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

Date: 03/27/1995

NET Job Number: 95.00807

Contact: Louise Hauke
Project: 2815-011

Analyte	CCV	Concentration Found	Percent Recovery	Date Analyzed
	True Concentration			
QAR TPH-GAS (S)				
TPH-Gas	700	646	92.3	03/23/1995

CCV - Continuing Calibration Verification

Note: Recovery limits for 8240, 8260, 8270, 8010, 8020, 624, 625 specified in method.
Gasoline, Diesel, 418.1, 418.1M limits 80-120%. Metals recovery limits 80-120%.

QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

Date: 03/27/1995

NET Job Number: 95.00807

Contact: Louise Hauke
Project: 2815-011

Analyte	LCS True Concentration	Concentration Found	LCS % Recovery	Date Analyzed
OAR TPH-GAS (S)				
TPH-Gas	350	306	87.4	03/23/1995
OAR TPH-GAS (S)				
TPH-Gas	350	282	80.6	03/23/1995

LCS - Laboratory Control Standard

Note: Recovery limits for fuels 80-120%. 8010, 8020, 8240, 8260, 8270, 624, 625 specified in method.
Recovery limits for metals analyses 80-120%. 418.1 limits are 90-140%.

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

Date: 03/27/1995
Job Number: 95.00807

Contact: Louise Hauke
Project: 2815-011

Analyte	Matrix	Sample	Spike	Percent	MSD	MSD	Percent	MS/MSD		
	Spike		Amount			Units			Result	Amount
OAR TPH-GAS (S)	Result	Result	Amount	Units	Recovery	Result	Amount	Units	Recovery	RPD
TPH-Gas	74.5	ND	64.75	mg/Kg	115.1	78.1	64.75	mg/Kg	120.6	4.7

NOTE: Matrix Spike Samples may not be samples from this job.

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

dil. = Diluted Out

QUALITY CONTROL REPORT BLANKS

Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

Date: 03/27/1995

NET Job Number: 95.00807

Contact: Louise Hauke
Project: 2815-011
Location: Lynden Farms

Analyte	Blank Analysis	MDL	Units	Date Analyzed
OAR TPH-GAS (S)				
TPH-Gas	ND	10	mg/Kg	03/23/1995
aaa-Trifluorotoluene (Surr.)	62	-	%	03/23/1995

Advisory Control Limits for Blanks:

Metals/Wet Chemistry/ Conventional/GC - all compounds should be less than the Reporting Limit.

GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.

QUALITY CONTROL REPORT DUPLICATES

Energy and Env. Solutions
1784 Picasso #A
Davis, CA 95616

Date: 03/27/1995
Job Number: 95.00807

Contact: Louise Hauke
Project: 2815-011

Analyte	Original Analysis	Duplicate Analysis	Units	RPD	Date Analyzed	Flag
QAR TPH-GAS (S)						
TPH-Gas	ND	ND	mg/Kg		03/23/1995	
QAR TPH-GAS (S)						
TPH-Gas	ND	ND	mg/Kg		03/23/1995	

NOTE: Duplicates may not be samples from this job.

RPD - Relative Percent Difference

Explanation of Data Flags

- A This sample does not have a typical gasoline pattern.
- B1 This sample does not have a typical diesel pattern.
- B The blank exhibited a positive result greater than the reporting limit for this compound.
- C The sample appears to contain a lighter hydrocarbon than gasoline.
- D The sample appears to extend to a heavier hydrocarbon range than gasoline.
- E The sample appears to extend to a lighter hydrocarbon range than diesel.
- F The sample appears to extend to a heavier hydrocarbon range than diesel.
- G The positive result for gasoline is due to single component contamination.
- H The gasoline elution pattern for the sample is not typical.
- I The oil pattern for this sample is not typical.
- J The result for this compound is an estimated concentration.
- L The LCS recovery exceeded control limits. See the LCS page of this report.
- M MS and/or MSD percent recovery exceeds control limits.
- MR The MS/MSD RPD is greater than 20%. The sample was re-extracted and re-analyzed with similar results. This is due to a matrix interference, likely a non-homogeneity of the sample.
- P A post digestion spike was analyzed, and recoveries are within control limits.
- Q Detection limits elevated due to sample matrix.
- R The duplicate RPD was greater than 20%. The sample was re-extracted and re-analyzed with similar results. This indicates a matrix interference in the sample, likely a non-homogeneity of the sample.
- SR Surrogate recovery outside control limits. See the surrogate page of the report.
- W The duplicate RPD was greater than 20%. Due to insufficient sample, re-analysis was not possible.
- X Sample was analyzed outside recommended holding times.



Environmental Laboratories, Inc.
3669 Gold Canal Drive
Rancho Gordona
CA 95070
Phone 916/852-6600
Fax 916/852-7292

NET 75. W604
CHAIN OF CUSTODY RECORD 12627

SEE SIDE 2 FOR
COMPLETE
INSTRUCTIONS

Project Name: Lynden Farms
Project Number: 2815.011
Project Location: (State) OR

FOR LABORATORY USE ONLY

Laboratory Project #: _____ Storage ID: _____
Sample Condition Upon Receipt: Temp: _____ °C Gelger: _____
Custody Seals Present? Yes/No Intact? Yes/No Samples Intact? Yes/No

Sample Disposal
(check one)

☒ Laboratory Standard

☐ Other _____

Level of QC
(see Side 2)

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6A ☐ 6B
☐ 6C ☐ 6D ☐ 6E ☐ 6F ☐ 7 ☐ 8 ☐ A

Write in →
Analysis Method

ANALYSES REQUESTED

SAMPLE INFORMATION

FOR LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description		Container(s)		Matrix Type	Pres. Type	TAT	TPH - G (gus)									
				Locator	Depth	#	Type													
1	B8-1	3-22	1355		11	1	40Z	SOIL	ICE	48	X									
2	B8-2	3-22	1405		15	1					X									
3	B13-1	3-22	1605		7	1					X									
4	B13-2	3-22	1610		9	1					X									
5	B13-3	3-22	1610		11	1					X									
6	B13-4	3-22	1635		15	1					X									
7	B14-1	3-22	1710		5	1					X									
8	B14-2	3-22	1720		9	1					X									
9	B14-3	3-22	1730		15	1	↓	↓	↓	↓	X									
10																				

SEND REPORT TO:

Company Name Energy + Env. Solns
Client Name 1784 PICASSO, HA
Address DAVIS CA 95616
Phone 916/756-5912 Fax 7569207

BILL TO (if different):

Company Name General Atomics
Address SAN DIEGO
PO # _____
Phone 619/45553000 Fax _____

Special Instructions/Comments

GASOLINE ODORS PRESENT IN
ALL SAMPLES; STRONGEST IN
SHALLOWEST SAMPLES.

Report due Monday 3-27

Sampler Name LOUISE M. HAUKE

Signature _____

PPB Worn in Field

LEVEL D

Relinquished By: _____ Date/Time 3-23-95/855

Received By or Method of Shipment/Shipments I.D. Tom L. Cadd Date/Time 3-23-95 8:55AM

Relinquished By: _____ Date/Time _____

Received By or Method of Shipment/Shipments I.D. _____ Date/Time _____

Relinquished By: _____ Date/Time _____

Received By or Method of Shipment/Shipments I.D. _____ Date/Time _____

**Common
Analytical Methods**

413.1
413.2 Long Method
413.2 Short Method
418.1 Long Method
418.1 Short Method
420.1
502.2
503E
503.1
524.2
601
602
604
608
610
624
625
8010
8015
8015 Mod.
8020
8021
8040
8080
8100
8150
8240
8270
8310
Acidity
Alkalinity
BTEX
Chloride
CLP (see Side 2)
COD
Color
Conductivity
Corrosivity
Cyanide
Flashpoint
Fluoride
General Mineral
Hex. Chromium
Ion Balance
Metals (write specific
metal & method #)
Metals 8010
Metals PPB
Metals Title 22:
TTL Level
8TLC Level
(see Side 2)
Nitrate
Nitrite
Odor
Org. Lead
Org. Mercury
Percent Moisture
Percent Solid
Perchlorate
pH
Phosphates
Phosphorus
Sulfate
Sulfides
TCLP:
VOA
Semivolatile
Metals
Pesticide
TDS
Total Hardness
Total Solids
TPH/D
TPH/G
TSS
Turbidity

SECTION V



P.O. Box 4797, Portland, OR 97208-4797

6135 N. Basin, Portland, OR 97217 (503) 285-8313 • FAX: (503) 285-6399

February 11, 1994

Mr. Bruce G. Berning
TONKIN, TORP, GALEN, MARMADUKE AND BOOTH
888 SW Fifth Ave.
Suite 1600
Portland, OR 97204-2099

Re: Basin Avenue Property
Environmental Site Assessment

Dear Mr. Berning:

Enclosed is a copy of the test certificate for the tank tightness test of our waste oil underground storage tank (UST). The precision tank test was conducted by Jerry Barr of Earth Science Technology, Federal I.D. # 33-0284163. The method used was the Horner Easy Chek test.

The tank is currently active, operating under State of Oregon Department of Environmental Quality UST permit #BCFJA. We are investigating any upgrades that may be required to meet UST regulations to keep the tank active.

As requested, we will give written notice of any proposed actions and the names of any parties with whom we will contract to perform such activities.

On February 3, 1994, Dennis Rose of Land O' Lakes, Inc., Western Feed Division in Portland, Oregon, requested assistance in performing soil borings to test soil and ground water in the area of the decommissioned Cenex diesel UST. James L. Arnone was contacted about the proposed activity on February 3, 1994. Three soil borings were completed on February 9, 1994. The investigation was coordinated by Charles Spears of Environmental Inspection Services.



Mr. Bruce G. Berning
TONKIN, TORP, GALEN, MARMADUKE AND BOOTH
February 10, 1994
Page 2

Please contact me at 285-0326 if you have any questions.

Sincerely,

Bill Montero

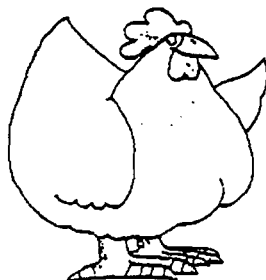
Bill Montero
Maintenance Supervisor

BM:ag

cc w/enc.:

James Arnone, Latham & Watkins
John Davenport, Sussman Shank

cc: Phil Crocker
Larry Custer
Mike McCullaugh



EARTH SCIENCE TECHNOLOGY

TEST CERTIFICATE

TANK OWNER LYNDEN FARMS
CONTACT PERSON BILL MONTERO
ADDRESS PO BOX 4797
CITY, STATE PORTLAND, OR 97208
TELEPHONE (503) 285-0326
TANK ADDRESS 6135 N. BASIN AVE.
CITY, STATE PORTLAND, OR
TEST METHOD HORNER EZY-CHEK
TEST DATE DECEMBER 7, 1993

TANK	CAPACITY	PRODUCT	HIGH TEST	
<u>#1</u>	<u>275</u>	<u>W. O.</u>	<u>-.0016</u>	

REMARKS TANK AND LINES PASSED THE TEST CRITERIA BASED ON THE CURRENT EPA
STANDARDS FOR A TIGHT TANK AT THIS POINT IN TIME.

APPROVAL JLB/SLD SIGNATURE J. Barr

HORNER EZY-CHEK

***** C U S T O M E R D A T A *****

JOB NUMBER : 000198
 CUSTOMER (COMPANY NAME) : LYNDEN FARMS
 CUSTOMER CONTACT(LAST, FIRST): MIKE PAGANO
 ADDRESS - LINE 1 : 6135 N. BASIN AVE.
 ADDRESS - LINE 2 :
 CITY, STATE : PORTLAND, OREGON
 ZIP CODE (XXXXX-XXXX) : 97217
 PHONE NUMBER (XXX)XXX-XXXX : 503/285-0326

***** C O M M E N T L I N E S *****

***** S I T E D A T A *****

SITE NAME (COMPANY NAME) : LYNDEN FARMS
 SITE CONTACT(LAST, FIRST) : MIKE PAGANO
 ADDRESS - LINE 1 : 6135 N. BASIN AVE.
 ADDRESS - LINE 2 :
 CITY, STATE : PORTLAND, OREGON
 ZIP CODE (XXXXX-XXXX) : 97217
 PHONE NUMBER (XXX)XXX-XXXX : 503/285-0326

 GROUND WATER LEVEL (FT) : 0

 NUMBER OF TANKS : 1

 LENGTH OF PRE-TEST (MIN) : 30
 LENGTH OF TEST (MIN) : 180